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Fertilizer Report

January 1 to July 31, 1920

JAMES W. KELLOGG, Chief Chemist

BUREAU OF CHEMISTRY

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CONTENTS.

Page.

Letter of Transmittal, ... 5

Introduction, ... 7

Acknowledgments, ... 9

Fertilizer Laws, ... 10

Discussion of Results of Inspection, ... 14

Deficiencies, ... 21

Average Analyses and Retail Prices, ... 23

Key to Tables, ... 25

Complete Fertilizers, Table I, ... 26

Nitrogen and Phosphoric Acid Fertilizers, Table II, ... 52

Ground Bone Fertilizers, Table III, ... 66

Acidulated Phosphate Fertilizers, Table IV, ... 70

Rock and Potash Fertilizers, Table V, ... 80

Miscellaneous Fertilizers, Table VI, ... 88

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LETTER OF TRANSMITTAL.

DEPARTMENT OF AGRICULTURE
BUREAU OF CHEMISTRY
Harrisburg, Pa., January 6, 1921.

Hon. Fred Rasmussen,
Secretary of Agriculture,
Harrisburg, Pa.

Dear Sir:—I have the honor to transmit herewith for your approval a report of the results of the inspection of commercial fertilizers received from the authorized special Sampling Agents during the Spring season of 1920, showing in detail the chemical analyses of samples with explanatory remarks. The completion of this work has been somewhat delayed because of the moving and installation of equipment in the new quarters recently provided for the Bureau.

It is recommended that this report be published in bulletin form for distribution

Very respectfully,

JAMES W. KELLOGG,
Chief Chemist.

FERTILIZER REPORT

January 1 to July 31, 1920.

INTRODUCTION

The Fertilizer Sales Agencies throughout the State were visited during the Spring season of 1920 by the Special Agents and 1312 samples were drawn from the original sacks, in accordance with the customary method of sampling, and together with reports covering each sample, were forwarded to the Bureau of Chemistry. Many places of business were visited where no samples were taken in order to avoid a large duplication of like brands but where the methods of labeling and guaranteeing were inspected. They represented 676 different brands of fertilizers, registered for 1920 by 77 manufacturing firms, and 1078 samples were analyzed separately for moisture, nitrogen, total, available and insoluble phosphoric acid and water soluble potash, to determine whether or not one or more of these elements of plant food, where claimed, would be found in agreement with guarantees printed upon sacks or attached cards as well as with those included in registrations on file. Those samples not analyzed were duplicates of registered brands and were not examined in order to avoid duplication and additional expense.

The samples representing brands where it were possible to include inferior sources of organic nitrogen, without making a declaration of the use of such materials on the labels, as required, as well as those fertilizers having the word "bone" as a part of the brand name, where it is also required that the phosphoric acid be derived entirely from bone, were subjected to a microscopical examination. In three samples of brands having the word "bone" as a part of the brand name the phosphoric acid was not entirely derived from animal bone. A study was also made of the character of the form or activity of the organic nitrogen in those brands guaranteed to contain 1 per cent., 2 per cent., 3 per cent. and 4 per cent. of nitrogen as ammonia. The results secured indicate that the average per cent. of the activity of the organic nitrogen exceeded 50 per cent. and, therefore, this source of nitrogen would not be classed as inferior, however the average activity was not as high as should be expected inasmuch as the average activity of the organic nitrogen in the samples examined, representing the four grades noted, did not exceed an activity of 65 per cent. In some of the fertilizers supplying 2 per cent. nitrogen as ammonia, where the percentage activity was less than 40 per cent., the organic nitrogen would be classed as being inferior in quality. A further study of the activity of the organic nitrogen will be made in the fertilizers obtained during the next season for the purpose of showing the source or quality of organic nitrogen which will indicate the percentage of available nitrogen supplied and it is hoped that a better source of nitrogen will be used in the mixed goods in the future and consequently show a higher percentage of active organic nitrogen.

The fertilizers were classified in six classes for the purpose of making comparisons and averages, the number of samples and classes being tabulated as follows:— 510 Complete Fertilizers, supplying nitrogen, available phosphoric acid and potash; 259 Nitrogen and Phosphoric Acid Fertilizers, supplying nitrogen and available phosphoric acid; 31 Ground Bone Fertilizers, furnishing nitrogen and total phosphoric acid; 137 Acidulated Phosphates, containing phosphoric acid in an available form; 102 Rock and Potash Fertilizers, guaranteed for available phosphoric acid and water soluble potash; and 39 Miscellaneous Fertilizers, including Nitrate of Soda, Tankage, Muriate of Potash, Manure Salts, Ammonium Sulphate and Nitrate of Potash.

The results of chemical analyses showed that 322, or 29.9 per cent. of the samples were deficient in one or more of their guarantees for nitrogen, phosphoric acid and potash. The largest proportion of deficiencies occurred in the Complete Fertilizers where 34.3 per cent. analyzed less than claimed and in the Nitrogen and Phosphoric Acid class 30.1 per cent. and in the Ground Bones 22.6 per cent. were found to be deficient. While there were many "overages," as will be noted by referring to the Tables which follow, showing the results of analyses in detail, it is to be regretted that such a large proportion of the samples were found to contain .2 per cent. or more, less plant food than guaranteed thus exceeding the percentage of deficiencies reported for the fertilizers obtained during the preceding Spring season of 1919. These deficiencies, especially where a large amount of fertilizer is used, indicates a serious loss to the farmers. The greatest variations from guarantees noted in the mixed fertilizers amounted to 1.59 per cent. nitrogen, 4.79 per cent. available phosphoric acid, and 2.12 per cent. potash and considering the estimated average retail unit values prevailing for these fertilizers of $14.14 for nitrogen, $1.74 for phosphoric acid and $2.88 for potash, these greatest losses would amount to $22.48, $8.33 and $6.11 a ton in the case of each of these respective deficiencies. The samples and brands of Complete Fertilizers outnumbered those of the other classes showing an increase, compared with those of the preceding Spring season's brands where the highest potash was 3 per cent., in the number of brands supplying potash, which in this season's fertilizers were guaranteed to contain as high as 10 per cent.

The retail selling prices averaged $44.15 for Complete Fertilizers, $38.49 for Nitrogen and Phosphoric Acid Fertilizers, $58.77 for Ground Bone Fertilizers, $28.03 for Acid Phosphate Fertilizers, and $36.96 a ton for the Rock and Potash Fertilizers. Of the Miscellaneous Fertilizers the average retail prices for Nitrate of Soda was $90.75 a ton, for Tankage $69.52 a ton, for Muriate of Potash $123.02 a ton, for Manure Salts $52.00 a ton, for Sulphate of Ammonia $160.00 a ton, and for Nitrate of Potash $101.20 a ton. These values show an increase over those prevailing for the fertilizers sold during the previous Spring and Fall seasons. The average retail unit values, estimated from the average compositions and retail prices for the fertilizers included herewith, give a value of $7.48 to $14.14 a unit for nitrogen, $1.74 a unit for phosphoric acid and from $2.88 to $6.43 a unit for potash.

In the following pages will be found copies of the fertilizer laws, a discussion of the results of analyses observed for each class of fertilizers, a discussion of the deficiencies and average analyses and retail prices and Tables showing in detail the results of the chemical analyses of each sample.

ACKNOWLEDGMENTS.

Mr. V. B. Hausknecht, First Assistant Chemist, had charge of the reception and preparation of samples, supervision of the details of the analytical work and the making of duplicate analyses and check determinations where required. Mr. H. E. Gensler performed the microscopical examinations and aided in the analytical work. Mr. W. E. Huber supervised the preparation of tables and the assembling of the necessary data. The chemical analyses were made by the following assistants: Messrs. G. J. Kuhlman, Jr., F. B. Williams, C. R. Engle and Leroy Pennypacker. The samples were prepared for analysis by W. W. Cassel.

FERTILIZER LAW

As amended May 29, 1917.

No. 205.

AN ACT

To regulate the manufacture and sale of commercial fertilizers; prescribing penalties for its violation, and repealing an act entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one.

Section 1. Be it enacted, &c., That all corporations, associations, partnerships, or persons, before selling or offering for sale any commercial fertilizer in the Commonwealth, except the dung of domestic animals, lime, marl and wood ashes, shall brand or attach to each bag, barrel, or package in a conspicuous place on the outside thereof, a plainly printed statement giving the following particulars and no others:—

(1) The number of pounds of fertilizer contained in the package.

(2) The name, brand, or trade-mark under which the fertilizer is sold.

(3) The name and principal address of the manufacturer, importer, or other person putting the fertilizer on the market in this Commonwealth.

(4) The minimum percentage of each of the following constituents which the fertilizer may contain: (a) Nitrogen; (b) nitrogen equivalent to ammonia; (c) total phosphoric acid; (d) available phosphoric acid; (e) potash soluble in distilled water. The potash may be claimed "derived from," or "equivalent to," sulphate of potash, if there is not a sufficient amount of chlorine present to unite with one-half (½) of one per centum (1%) of actual potash (K_2O). In the case of undissolved bone, tankage, phosphate rock, and similar materials in their natural and untreated conditions, when sold unmixed with other substances, the minimum percentage of the total phosphoric acid therein may be stated, instead of the percentage of total and available phosphoric acid. But, in the case of basic phosphatic slag, the available phosphoric acid shall be stated on the basis of the results of an analysis by the Wagner method, so-called, until such time as the Association of Official Agriculture Chemists of North America shall adopt an official method of analysis for basic slag, after which the available phosphoric acid shall be stated on the basis of an analysis by the method of said association.

Section 2. Every manufacturer or importer of commercial fertilizers, as specified in section one of this act, shall, on or before the first day of January of each year, or before offering them for sale, in this Commonwealth, file annually with the Secretary of Agriculture a statement of the names and number of brands of such commercial fertilizers, having distinct trade-names, that he shall offer for sale during the next ensuing year, and a copy of the analysis of each one of such brands of commercial fertilizers, as required by section one of this act.

Section 3. In addition to the statement required by section two of this act, every manufacturer or importer of commercial fertilizers shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture an affidavit showing the amount of each brand of fertilizer, having a distinct trade-name, sold within the Commonwealth during the last preceding year; and if the said amount shall be one hundred and fifty tons or less, he or they shall pay or cause to be paid to the Secretary of Agriculture the sum of fifteen dollars for each and every brand of such commercial fertilizer, having a distinct trade-name, sold within the State during the last preceding year; and if the said amount shall exceed one hundred and fifty tons, and be not more than two hundred and fifty tons, he or they shall pay the sum of twenty dollars, as aforesaid; if the said amount shall exceed two hundred and fifty tons, and not more than four hundred tons, he or they shall pay the sum of thirty dollars; if the amount shall exceed four hundred tons, and not more than five hundred tons, he or they shall pay forty dollars; and if the amount shall exceed five hundred tons, he or they shall pay fifty dollars. If such manufacturer or manufacturers, importer or importers, shall not have made any sales within the Commonwealth during the preceding year, he or they shall pay the sum of fifteen dollars upon each such brand, as aforesaid: Provided, That all moneys so received shall be immediately paid by the Secretary of Agriculture into the State Treasury for the use of the Commonwealth.

Section 4. No person shall sell, offer, or expose for sale, in this State, any pulverized leather, hair, ground hoofs, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure without an explicit statement of the fact; said statement to be conspicuously affixed to every package of such fertilizer or manure, and to accompany and go with every lot, parcel, or package of the same.

Section 5. Any person or persons selling, offering or exposing for sale, any commercial fertilizer or any brand of the same, having a distinct trade-name, without the analysis required by section one of this act, or with an analysis stating that it contains a larger percentage of any one or more of the above-named constituents than is contained therein, or for the sale of which all the provisions of sections two and three have not been complied with, or any person violating any of the provisions of section four of this act, shall be guilty of a misdemeanor, and, on conviction, shall be sentenced to pay a fine of not less than twenty-five nor more than one hundred dollars for the first offense, and not less than two hundred dollars for each subsequent offense. It shall be the duty of the Secretary of Agriculture to enforce the provisions of this act, and all penalties, costs, and fines recovered shall be paid by him or his duly authorized agent, and by him shall be immediately paid into the State Treasury, for the use of the Commonwealth.

Section 6. The Secretary of Agriculture is hereby empowered to collect samples of commercial fertilizers, either in person or by his duly qualified agent or representative, and to have them analyzed, and to publish the results for the information of the public; and for this purpose the said Secretary of Agriculture, such assistants, agents, experts, chemists, detectives, and counsel as he shall duly authorize, shall have full access, ingress, and egress to and from all places of business, factories, barns, buildings, carriages, cars, and vessels, used in the manufacture and transportation, or sale, of any commercial fertilizer. They shall also have power to open any package or vessel containing or supposed to contain any commercial fertilizer and take therefrom samples for analysis, upon tendering the value of said samples.

Section 7. The term "commercial fertilizers," as used in this act, shall be construed to mean any and every substance imported, manufactured, prepared, or sold for fertilizing or manuring purposes, except the dung of domestic animals, marl, lime, and wood-ashes, and not exempt by the provisions of section one of this act.

Section 8. This act shall go into effect on and after the thirty-first day of July, one thousand nine hundred and nine; and the act entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one, is hereby repealed.

Approved—The 1st day of May, A. D. 1909.

EDWIN S. STUART.

BONE LAW.

No. 95.

AN ACT

Making it unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone; and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That it shall be unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone.

Section 2. Any person or persons violating the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall pay a fine of fifty dollars for the first offense, and a fine of not less than one hundred dollars, nor more than two hundred dollars for every subsequent offense; such fine or fines to be paid into the State Treasury, for the use of the Commonwealth. The Secretary of Agriculture shall, together with his deputies, agents, and assistants, be charged with the enforcement of this act.

Section 3. All magistrates, aldermen, and justices of the peace throughout this Commonwealth shall have jurisdiction to hear and determine actions arising from violations of the provisions of this act, and shall have authority to hold for court, or to impose the penalty hereby prescribed, subject to appeal, as the law shall direct.

Section 4. This act shall go into effect on the first day of January, Anno Domini nineteen hundred and ten.

Approved—The 23rd day of April, A. D. 1909.

EDWIN S. STUART.

DISCUSSION OF THE RESULTS OF INSPECTION.

COMPLETE FERTILIZERS.

Analyses in Table I.

The Complete Fertilizers, those guaranteed to contain nitrogen, phosphoric acid and potash, included 510 samples, representing 324 different brands, offered for sale during the Spring season and registered by 64 companies. This class of Fertilizers outnumbered the other classes, indicating that during the Spring season a larger proportion of the brands supplying potash as well as nitrogen and phosphoric acid were being used and also showing an increase over the Complete Fertilizers found on the markets during the corresponding season of 1919 when the Nitrogen and Phosphoric Acid Fertilizers, not containing potash, outnumbered the Complete Fertilizers and included 103 less brands than were received during the Spring season of 1920. They were guaranteed to contain from a trace to 6.60 per cent. of nitrogen, from 3 per cent. to 12 per cent. available phosphoric acid and from .50 per cent. to 10 per cent. water soluble potash. A considerable increase in the amount of potash supplied is especially noted compared to the highest guarantees of 3 per cent. and 6 per cent. for the two previous seasons' brands. One-third of the brands were guaranteed to contain 2 per cent. of potash with a few showing fractional amounts. There were 68 brands guaranteed to contain 1 per cent. potash; 106, 2 per cent; 49, 3 per cent; 67, 4 per cent; 21, 5 per cent; 6, 6 per cent; and one brand each with guarantees of 7 per cent. and 10 per cent. water soluble potash. In 296 samples the potash was found to be in the muriate form, 52 in the sulphate form and in 162 the potash was estimated as being present in both forms. There were 12 brands having brand names indicating they were designed for use in fertilizing tobacco and samples representing 7 of these brands contained potash in the muriate form, one analyzing 10 per cent. potash, one in the sulphate form and 4 brands contained both muriate and sulphate of potash. Upon chemical analyses they were found to contain from .08 per cent. to 6.50 per cent., averaging 1.51 per cent. nitrogen; from 4.58 per cent. to 13.85 per cent., averaging 8.42 per cent. available phosphoric acid; from .06 per cent. to 13.56 per cent., averaging 1.17 per cent. insoluble phosphoric acid, and from .43 per cent. to 10.12 per cent., averaging 2.83 per cent. potash. The results of analyses of one sample of liquid fertilizer, containing small amounts, and another low grade brand containing less than a total of 1 per cent. of nitrogen, phosphoric acid and potash were not included in the averages because of there being such a difference in composition compared with the usual brands of Complete Fertilizers. Compared with the previous Spring season's samples of 1919 the average content of nitrogen was slightly higher and contained 1.56 per cent. more potash. Of the total number of samples received 175, or 34.3 per cent., an increase of 10 per cent. over the two previous season's fertilizers, were found upon analysis to fall below their guarantees in one or more elements of plant food, the greatest deficiencies amounting to 1.59 per cent. in nitrogen, 4.79 per cent. in available phosphoric acid and 2.12 per cent. in potash. There were 37 samples, or 7.3 per cent., deficient in nitrogen; 84, or 16.5 per cent. deficient in available phosphoric acid; and 72, or 14.1 per cent. deficient in potash. In one sample of "Levering's Ammoniated Bone," the phosphoric acid was not entirely derived from animal bone as required. There were also many samples which were found to considerably exceed their guarantees and in a number of those found deficient in one element the "overages" in the remaining elements tended to compensate for such failures to meet guarantees, however it is to be regretted that such a large proportion were found deficient. The 324 brands of Complete Fertilizers included 75 different formulas or grades having guarantees of from a trace to 8 per cent. nitrogen as ammonia, ¼ of 1 per cent. to 12 per cent. available phosphoric acid and from ⅛ of 1 per cent. to 10 per cent. of potash. The grade 2-8-2 was represented by 33 brands and 54 samples, averaging 1.71 per cent. nitrogen, 8.38 per cent. available phosphoric acid and 2.18 per cent. potash. The retail selling prices of these grades were from $38.47 to $52.00, a difference of $13.53 a ton for fertilizers supplying the same amount of plant food, and averaged $43.13 a ton. The fertilizers having the formulas 1-8-2 included 28 brands and 53 samples, averaging 1.01 per cent. nitrogen, 8.23 per cent. available phosphoric acid, and 2.07 per cent. potash, and sold for from $32.00 to $55.00, averaging $38.95 a ton, showing a difference of $23.00 for the same kind or grade. There were 27 brands and 51 samples having a 1-8-1 formula, which averaged .98 per cent. nitrogen, 8.29 per cent. available phosphoric acid, and 1.13 per cent. potash and which were reported as selling for from $30.00 to $48.00, averaging $35.80 a ton, a difference of $18.00 for the same amount of plant food. Of the 1-8-4 grade there were 26 brands and 48 samples having an average analysis of 1.04 per cent. nitrogen, 8.19 per cent. available phosphoric acid and 4.05 per cent. potash. The retail selling prices were from $38.47 to $57.00, and averaged $44.48 a ton, showing a difference of $18.53 a ton. In a like manner where several samples of the same grade were compared similar variations in selling prices were noted. At the higher rates charged for many of these grades a greater amount of plant food, or a fertilizer having a larger formula, if such a higher grade had been bargained for, could have been purchased for the same or less money. It is quite likely that the items of commissions, freight and other over-head charges made up a part of these differences, however it is evident that it is important to pay attention to the formula grades of fertilizers and their quoted selling values if the largest amount of plant food is to be had for the money expended. The selling prices for the Complete Fertilizers, as a class, ranged from $24.30 to $85.00, and averaged $44.15 a ton, compared with the average values for Spring of 1919 of $42.87 a ton and of $34.91 a ton for the Complete Fertilizers sold during the previous Fall season. In order that the average composition and selling prices of the several formula grades of Complete Fertilizers may be had for comparison the following Table has been prepared showing the formulas, number of brands and samples and the average analyses and selling prices where two or more of the same grade were received.

Formula.	Number of Brands.	Number of Samples.	Nitrogen.	Phosphoric Acid.	Potash.	Price.
1/10-10-4,	1	3	0.21	9.76	3.69	$39 17
*1/6-¼-1/8,	1	1	0.15	0.27	0.16	14 00
½-6-½,	1	1	0.65	5.64	1.20	28 00
½-6-1,	1	3	0.75	6.85	1.32	30 88
½-7-1,	1	1	0.40	6.89	1.08	33 00
½-7-2,	2	5	0.55	6.76	2.42	32 90
½-8-½,	1	3	1.46	8.74	1.96	31 87
½-8-1,	3	6	0.65	8.29	1.18	31 38
½-8-2,	5	9	0.62	8.11	2.35	34 81
½-10-1,	1	1	0.58	11.14	0.93	34 00
1-5-1,	2	2	1.00	7.44	1.07	35 50
1-7-1,	18	27	1.02	7.26	1.25	35 16
1-7-2,	1	1	0.92	8.88	2.83	32 50
1-7-3,	1	1	1.04	7.10	2.95	36 00
1-7-4,	2	2	0.99	8.04	4.13	39 61
1-8-1,	27	51	0.98	8.29	1.13	35 85
1-8-1½,	1	1	0.67	8.00	2.30	35 20
1-8-2,	28	53	1.01	8.23	2.07	38 95
1-8-3,	2	3	0.94	8.03	3.47	42 20
1-8-4,	26	48	1.04	8.19	4.05	44 48
1-8-5,	2	2	1.16	7.97	5.91	51 25
1-8-6,	1	3	0.92	8.28	6.19	50 84
1-9-1,	3	4	1.02	9.43	1.04	36 44
1-9-2,	5	5	1.20	9.08	2.42	38 56
1-9-3,	15	24	0.98	9.34	3.00	41 92
1-9-4,	2	4	1.14	9.23	3.77	44 08
1-10-1,	6	7	1.13	9.58	1.29	36 96
1-10-2,	1	2	1.11	10.74	2.33	40 75
1-11-1,	1	2	1.08	11.16	1.27	38 00
1-11-2,	1	1	1.13	13.85	1.74	---------
1½-8-2,	1	1	1.27	8.91	1.57	40 00
1¾-7-2,	1	2	1.56	7.20	1.86	43 25
2-6-2,	1	1	1.53	6.00	2.00	49 00
2-6-3,	1	3	1.53	6.06	2.92	47 33
2-6½-4½,	1	1	1.12	7.69	4.22	48 96
2-7-3,	1	1	1.34	7.20	2.92	45 00
2-7-5,	1	1	1.63	8.03	4.92	49 00
2-8-1,	2	2	1.71	8.78	1.77	41 00
2-8-2,	33	54	1.71	8.38	2.18	43 13
2-8-3,	19	25	1.79	8.14	3.26	47 41
2-8-4,	9	13	1.95	8.25	4.24	49 32
2-8-5,	10	23	1.76	8.24	5.05	52 64
2-9-3,	2	3	1.60	9.17	2.86	46 25
2-10-2,	8	9	1.91	10.00	2.03	45 71
2-10-3,	1	1	1.49	9.49	3.14	46 00
2-10-4,	6	8	1.69	9.84	4.17	51 50
2-10-6,	1	1	1.49	9.99	6.39	58 00
2-12-2,	6	12	1.81	11.44	2.02	46 65
*2½-3-3,	1	1	2.56	3.35	4.59	---------
2½-10-2,	1	1	2.64	10.04	3.43	---------
3-6-10,	1	1	2.42	6.77	10.12	70 00
3-8-1,	1	1	2.63	7.10	1.22	68 00
3-8-3,	5	7	2.26	8.55	3.16	54 07
3-8-4,	9	13	2.67	8.19	4.27	56 25
3-8-5,	1	1	2.29	8.38	4.50	61 00
3-9-2,	6	6	2.54	8.90	2.21	56 25
3-10-2,	1	1	1.75	7.62	2.10	50 00
3-12-3,	1	1	2.13	11.72	3.56	52 00
3½-6-2,	1	1	2.70	5.71	2.24	53 00
4-6-2,	1	1	2.99	5.93	2.67	51 25
4-8-4,	11	13	3.07	8.32	4.25	62 55
4-8-5,	2	2	3.10	8.77	5.23	70 00
4-8-6,	4	6	2.92	8.48	6.34	66 86
4-9-1,	1	1	3.45	9.36	1.46	54 00
4-10-2,	1	2	3.06	9.78	2.16	58 50
4-10-4,	1	1	3.25	10.03	4.42	56 00
4½-7-5,	1	1	3.53	6.89	5.96	67 00
5-4-5,	1	1	4.10	4.58	6.02	76 00
5-5-5,	1	1	4.68	5.83	5.33	85 00
5-6-1,	1	1	4.26	4.68	1.44	57 00
5-6-5,	1	3	3.64	7.33	4.65	68 50
5-8-5,	1	1	4.00	7.68	6.42	69 00
5-8-7,	1	3	3.66	8.52	7.30	73 23
6-8-2,	1	1	5.40	8.35	2.14	---------
8-4-2,	1	1	6.50	5.18	2.62	75 00
75 Totals,	324	510	1.51	8.42	2.83	$44 15

*Not included in average.

NITROGEN AND PHOSPHORIC ACID FERTILIZERS.

Analyses in Table II.

There were 259 samples of Acidulated or Dissolved Bones and fertilizers of like composition supplying nitrogen and available phosphoric acid received and analyzed during the Spring season representing 157 brands registered by 53 companies. There were about half as many samples and brands of this class as there were of Complete Fertilizers compared with a larger number of samples and brands than of Nitrogen and Phosphoric Acid Fertilizers obtained during the corresponding Spring season of 1919, indicating a continued increase in the number of brands of Complete Fertilizers, which supplied potash, found being offered for sale subsequent to the shortage of potash during the war period. They were guaranteed to contain from .50 per cent. to 4.12 per cent. nitrogen and from 4.00 per cent. to 14.00 per cent. available phosphoric acid. Upon analysis they were found to contain from .50 per cent. to 3.94 per cent., averaging 1.48 per cent. nitrogen, and from 6.43 per cent. to 17.22 per cent., averaging 10.10 per cent. available phosphoric acid. The insoluble phosphoric acid varied from .05 per cent. to 8.36 per cent., averaging 1.53 per cent. Eighteen samples, or 6.9 per cent., were deficient in nitrogen and 65, or 25.1 per cent., were deficient in available phosphoric acid, or 78, or 30.1 per cent., an increase over those selected during the Spring of 1919 of the total number of samples received, being found deficient in one or both forms of plant food, the greatest variations from the guarantees amounting to .80 per cent. in nitrogen and 4.76 per cent. in available phosphoric acid. In one sample of "Fish Bone and Potash" and in one sample of "Lancaster Ammoniated Bone Manure," the phosphoric acid was not entirely derived from animal bone as required. The selling prices varied from $25.00 to $75.00, averaging $38.49 a ton. These values were close to those prevailing for this class of fertilizers for the corresponding Spring season of 1919, which averaged $37.99 a ton and show an increase over the average retail value of $31.65 a ton for this class of fertilizers obtained during the preceding Fall season.

GROUND BONE FERTILIZERS.

Analyses in Table III.

The samples classified as Ground Bone Fertilizers, including both Raw and Steamed Bone, numbered 31 and represented 22 brands registered by 18 companies. They were guaranteed to contain from

1.65 per cent. to 4.50 per cent. of nitrogen and from 11.00 per cent. to 25.00 per cent. total phosphoric acid. They were found, upon analysis, to contain from 2.02 per cent. to 5.25 per cent., averaging 3.16 per cent. nitrogen, and from 13.81 per cent. to 26.72 per cent., averaging 23.48 per cent. total phosphoric acid. The results of determinations for fineness showed that the portions upon sieving, which passed a 1-50th of an inch mesh sieve, varied from 34 per cent. to 99 per cent., averaging 63 per cent. "fine" while those portions not passing such a sieve varied from 1 per cent. to 66 per cent. and averaged 37 per cent. "coarse". Of the total number of samples 7, or 22.6 per cent., were deficient. There were 3, or 9.7 per cent., deficient in nitrogen, the greatest variations from the guarantee amounting to 1.01 per cent. and 4, or 12.9 per cent. of the samples were deficient in total phosphoric acid, one containing 6.70 per cent. less than claimed. The retail selling prices ranged from $45.00 in a brand supplying 3.85 per cent. nitrogen and 21.56 per cent. total phosphoric acid to $80.00 in a brand analyzing 3.63 per cent. nitrogen and 22.13 per cent. total phosphoric acid, averaging $58.77 a ton, compared with the average retail values of $53.81 and $55.85 a ton noted for the previous Spring and Fall brands of 1919 respectively.

ACIDULATED PHOSPHATE FERTILIZERS.

Analyses in Table IV.

There were 137 samples representing 77 different brands of Acidulated Phosphate Fertilizers or Acid Phosphates registered by 48 companies received during the Spring season. One sample or brand was guaranteed to contain 10 per cent.; 3, 13 per cent.; 30, 14 per cent. and 103, 16 per cent. available phosphoric acid as well as being guaranteed for total phosphoric acid. They were found to analyze from 12.02 per cent. to 18.09 per cent., averaging 16.08 per cent. available phosphoric acid and the insoluble phosphoric acid ranged from .05 per cent. to 2.98 per cent. and averaged .81 per cent. The total phosphoric acid varied from 13.52 per cent. to 18.88 per cent., and averaged 16.89 per cent. Sixteen, or 11.7 per cent. of these samples, 12 being guaranteed 16 per cent. of available phosphoric acid, were classed as being deficient as they were found to contain from .2 per cent. to 1.28 per cent. less than guaranteed. This proportion of deficiencies was approximately the same as noted in this class of fertilizers found being offered for sale during the two previous Spring and Fall seasons of 1919. The retail selling prices were from $24.25 for a brand analyzing 17.11 per cent. available phosphoric acid to $35.00 in a brand containing 16.79 per cent., both being guaranteed to contain 16.00 per cent., and averaged $28.03 a ton. The average retail selling price and percentage of available phosphoric acid gives an average retail value of $1.74 a unit, or 9c a pound, for phosphoric acid in this class of fertilizers. These values show a very slight increase over those of $26.56 and $27.89 a ton observed for the two previous season's brands.

ROCK AND POTASH FERTILIZERS.

Analyses in Table V.

The fertilizers classified as Rock and Potash Fertilizers and guaranteed to contain available phosphoric acid and water soluble potash, numbered 102 samples and 70 brands, which were registered by 37 companies. They were guaranteed to contain from 5.00 per cent. to 12.00 per cent. available phosphoric acid, the majority being guaranteed 10.00 per cent. and 12.00 per cent., and from 2.00 to 5.00 per cent. of water soluble potash. With the exception of two samples of one brand, excluded from the average, they were found to contain, upon analysis, from 6.22 per cent. to 13.00 per cent., averaging 10.19 per cent. available phosphoric acid, from .11 per cent. to 3.14 per cent., averaging .94 per cent. insoluble phosphoric acid and from .90 per cent. to 6.26 per cent., averaging 2.99 per cent., water soluble potash. Determinations of the form of potash in this class of fertilizers showed that in 63 samples the potash was in the form of muriate, 7 as sulphate and 32 as both muriate and sulphate of potash. A large proportion of the samples, 43 or 42.2 per cent., were found to be deficient in one or both forms of plant food, 27 or 26.5 per cent. being deficient in phosphoric acid and 21 or 20.6 per cent. being deficient in potash, the deficiencies amounting to as high as 3.21 per cent. in phosphoric acid and 1.10 per cent. in potash. The retail selling prices, at which these brands of this class of fertilizers were offered for sale, varied from $30.00 to $50.00 and averaged $36.96 a ton, exclusive of the brand excluded from the average, which was sold in small packages at the retail of 10 pounds for 65c, which would be equivalent to $260.00 on the ton basis. The retail selling prices for the Rock and Potash Fertilizers for the Spring of 1919 was $37.18 a ton and for the Fall of 1919 $32.00 a ton.

MISCELLANEOUS SAMPLES.

Analyses in Table VI.

There were 39 samples of fertilizers received and analyzed and classed as Miscellaneous, which included 21 samples and 14 brands of Nitrate of Soda, 8 samples and 6 brands of Tankage, 6 samples and 3 brands of Muriate of Potash, 1 sample and brand of Manure Salts, 2 samples of 1 brand of Sulphate of Ammonia and 1 sample and brand of Nitrate of Potash, all of which were registered by 17 different companies. The Nitrate of Soda averaged 15.60 per cent. of nitrogen and $90.75 a ton. The samples of Tankage had an average analysis of 6.40 per cent. nitrogen, 11.13 per cent. total phosphoric acid, and sold for an average retail price of $69.52 a ton. The average analysis of the Muriates of Potash was 51.93 per cent. potash, selling for an average value of $123.02 a ton. The sample of Manure Salts contained 25.38 per cent. of potash and sold for $52.00 a ton. The 2 samples of Sulphate of Ammonia averaged 21.13 per cent. ammonia, 1 sample of which represented a brand selling at $100.00 a ton, and the sample of Nitrate of Potash contained 15.08 per cent. nitrogen, 16.08 per cent. potash, and sold at retail for $101.20 a ton. Of this group of fertilizers one sample of Tankage was deficient in nitrogen and 2 other samples were deficient in total phosphoric acid, making a total of 3 or 7.7 per cent. of this group of fertilizers, which were classed as being deficient.

DEFICIENCIES.

There were 322, or 29.9 per cent., of the samples of fertilizers out of a total of 1078 which, upon analysis, were found to be .20 per cent. or more below their guarantees in one or more of the forms of plant food, nitrogen, phosphoric acid and potash and, therefore, being considered as deficient. Where the guarantees were .50 per cent. or less, those samples which fell .10 per cent. or more below these guarantees were also considered deficient. Those deficient are indicated in the tables showing results of analyses by an asterisk (*). Of the 832 samples guaranteed for nitrogen 59 or 7.1 per cent. were deficient. Of the 1008 guaranteed for available phosphoric acid 192 or 19.0 per cent. were deficient. Of the 620 shown to contain water soluble potash 93 or 15.0 per cent. were deficient and 6 or 15.4 per cent. of the 39 samples guaranteed to contain total phosphoric acid were deficient. Of the 510 samples classified as Complete Fertilizers 37 or 7.3 per cent. were deficient in nitrogen, 84 or 16.5 per cent. were deficient in available phosphoric acid and 72 or 14.1 per cent. were deficient in water soluble potash, a total of 175 or 34.3 per cent. of this class of fertilizers, which were found deficient in one or more forms of plant food, amounting to as much as 1.59 per cent. less nitrogen, 4.79 per cent. less available phosphoric acid and 2.12 per cent. less water soluble potash than claimed. Of the 259 Nitrogen and Phosphoric Acid Fertilizers 18 or 6.9 per cent. were deficient in nitrogen and 65 or 25.1 per cent. were deficient in available phosphoric acid, or a total of 78 or 30.1 per cent., which contained from the small variations permitted to be considered deficient, up to .80 per cent. less nitrogen and 4.76 per cent. less available phosphoric acid than guaranteed. There were 31 samples of Ground Bone Fertilizers guaranteed to contain nitrogen and total phosphoric acid and 3 or 9.7 per cent. were deficient in the former and 4 or 12.9 per cent. in the latter forms of plant food or a total of 22.6 per cent. of the samples which failed to meet their guarantees. The greatest deficiencies noted in this class were 1.01 per cent. in nitrogen and 6.70 per cent. in total phosphoric acid. There were 137 samples of Acidulated Phosphates analyzed and 16 or 11.7 per cent. were found to be deficient in available phosphoric acid varying from .20 per cent. to 1 28 per cent. under their guarantees. In the Rock and Potash Fertilizers, supplying available phosphoric acid and water soluble potash, 27 or 26.5 per cent. and 21 or 20.6 per cent. of the 102 samples analyzed were found to contain less of these respective forms of plant food than guaranteed, or a total of 43 or 42.2 per cent. of the samples were deficient. These deficiencies in this class amounted to as much as 3.21 per cent. in available phosphoric acid and 1.10 per cent. in water soluble potash. There were 39 samples received and classified as Miscellaneous Fertilizers including Nitrate of Soda, Tankage, Muriate of Potash, Manure Salts, Sulphate of Ammonia and Nitrate of Potash. One sample of Tankage or 2.6 per cent. of the total number of Miscellaneous samples was deficient in nitrogen and 2 samples of Tankage or 5.1 per cent. were deficient in total phosphoric acid, making 3 or 7.7 per cent. of deficiencies in this class. There were, of course as will be noted by referring to the Tables of Analyses, a large number of "overages" which, to some extent, compensated for the deficiencies, however it is to be regretted that such a large proportion of the samples failed to meet their guarantees, thus in many instances where these guarantees were marked, causing considerable losses to the consumers. These deficiencies, for the period covered by this Report, slightly exceeded those noted during the corresponding Spring and preceding Fall seasons' inspection work of 1919. The following Table will show the number of samples of each class of fertilizer and those deficient in nitrogen, phosphoric acid and potash:

Classes of Fertilizers.	Number of samples.	Deficient in nitrogen.	Deficient in available phosphoric acid.	Deficient in potash.
Complete fertilizers,	510	37	84	72
Nitrogen and phosphoric acid fertilizers,	259	18	65	----------
Ground bone fertilizers,	31	3	*4	----------
Acidulated phosphate fertilizers,	137	----------	16	----------
Rock and potash fertilizers,	102	----------	27	21
Miscellaneous fertilizers,	39	1	*2	----------
Totals,	1,078	59	198	93

*Total phosphoric acid.

AVERAGE ANALYSES AND RETAIL PRICES.

The results of analyses of the samples of each class of fertilizers together with their retail selling prices were averaged and tabulated for comparison as follows:

	Complete fertilizers.	Nitrogen and phosphoric acid fertilizers (dissolved bone, etc.)	Ground bone fertilizers.	Acidulated phosphate fertilizers.	Rock and potash fertilizers.
Number of sampels,	510	259	31	137	102
	%	%	%	%	%
Moisture,	8.10	7.10	6.56	6.85	7.46
Total nitrogen,	1.51	1.48	3.16	----------	----------
Total phosphoric acid,	9.59	11.63	23.48	16.89	11.13
Available phosphoric acid,	8.42	10.10	----------	16.08	10.19
Insoluble phosphoric acid,	1.17	1.53	----------	0.81	0.94
Potash,	2.83	----------	----------	----------	2.99
Mechanical Analysis of Bone:					
Fine,	----------	----------	63	----------	----------
Coarse,	----------	----------	37	----------	----------
Selling price,	$44.15	$38.49	$58.77	$28.03	$36.96

Compared with the samples obtained during the previous Spring season of 1919 the Complete Fertilizers show a slightly higher average nitrogen, about the same content of available phosphoric acid and 1.56 per cent. more potash, the average selling price being $1.28 a ton more. In the Nitrogen and Phosphoric Acid and Ground Bone Fertilizers the retail selling prices averaged 50c and $4.96 a ton higher, the Acid Phosphates showed .50 per cent. more phosphoric acid and cost $9.07 more a ton and the Rock and Potash Fertilizers contained 1.28 per cent. more potash and sold for slightly less than did these classes during the previous Spring season. Compared with the brands reported for the preceding Fall season the Complete Fertilizers averaged .17 per cent. more nitrogen and .72 per cent. more potash and cost $9.24 more a ton. The average cost of the Nitrogen and Phosphoric Acid Fertilizers was $6.84 a ton more and the Ground Bones averaged .54 per cent. less nitrogen and cost $2.92 more a ton. The Acid Phosphates averaged .53 per cent. more available phosphoric acid and cost upon an average of $1.47 more a ton and in the Rock and Potash Fertilizers the average composition was practically the same although the average retail selling value was $4.96 a ton greater than for last Fall's brands. In other respects, with the exception as above noted, there were no marked differences in the average composition compared with the brands sold during 1919.

The average retail unit value of available phosphoric acid, estimated from the average of 16.08 per cent. in the Acid Phosphate Fertilizers, having an average retail selling price of $28.03 a ton would equal $1.74 a unit, or 9c a pound. Using this unit value for phosphoric acid and the average analysis and price given for the Nitrogen and Phosphoric Acid Fertilizers a retail unit value of $14.14, or 71c a pound would be had for nitrogen. In a like manner by using these unit values for phosphoric acid and nitrogen and the average values in the case of the Complete Fertilizers the retail unit value of potash would equal $2.88, or 14c a pound. In a similar manner also another estimation of the prevailing value of potash may be arrived at by using the above unit value for phosphoric acid and the average composition and selling price of the Rock and Potash Fertilizers and the value thus obtained would be $6.43 a unit for potash, or 32c a pound. By making use of the unit values of phosphoric acid obtained for the Acid Phosphates and the value for potash estimated in the Rock and Potash Fertilizers and applying these values to the average composition and selling price of the Complete Fertilizers, the retail value of nitrogen would equal $7.48 a unit, or 37c a pound. The retail unit values prevailing, therefore, for the Spring fertilizers, represented by the samples herein included, would be approximately from $7.48 to $14.14 a unit for nitrogen, $1.74 a unit for phosphoric acid and from $2.88 to $6.43 a unit for potash. These values for nitrogen and potash show a decided drop compared with the values thus obtained for the Spring fertilizers of 1919, reported as being from $12.80 to $13.00 for nitrogen and from $6.93 to $7.16 for potash and show a slight decrease in potash over the previous Fall brands, which were estimated as being from $7.00 to $9.43 a unit for nitrogen, $1.71 a unit for phosphoric acid and from $3.29 to $4.85 a unit for potash.

KEY TO TABLES.

The following tables include the detailed results of chemical analyses of each sample. All samples were given a chemist's number as shown in the extreme left and right hand columns and are grouped in alphabetical order of manufacturers and brand names. Each class is shown in separate tables and the following information will serve as a key to these tables:

The asterisk (*) indicates the cases where total nitrogen, available phosphoric acid and total potash are deficient to the extent of .2 per cent. or more below their respective guarantees. In cases where the guarantees are .5 per cent. or less the deficiencies noted are where the amount is .1 per cent. or more below the guarantees.

Order of results of analysis: Moisture, Total Nitrogen found and guaranteed, Total Phosphoric Acid found and guaranteed; Available Phosphoric Acid found and guaranteed; Insoluble Phosphoric Acid found and guaranteed; Total Potash found and guaranteed, and Potash as Muriate and as Sulphate.

To determine the formula of any brand, as guaranteed, multiply Total Nitrogen guaranteed by 1.2158 to obtain Ammonia and then use this figure and the guarantees for Available Phosphoric Acid and Total Potash. For example, Nitrogen guarantee equals .82% (.82x-1.2158=1%). Ammonia equals 1% Available Phosphoric Acid 8% Potash 1%. Formula therefore is 1-8-1.

Complete Fertilizers, Table I, furnishing Nitrogen, Phosphoric Acid and Potash.

Nitrogen and Phosphoric Acid Fertilizers, Table II, including Dissolved Bones and other like products.

Ground Bone Fertilizers, Table III, furnishing Nitrogen and Phosphoric Acid.

Acidulated Phosphate Fertilizers, Table IV, furnishing Phosphoric Acid.

Rock and Potash Fertilizers, Table V, furnishing Phosphoric Acid and Potash.

Miscellaneous Fertilizers, Table VI, including Nitrate of Soda, Tankage, Muriate of Potash, Manure Salts, Sulphate of Ammonia and Nitrate of Potash,

TABLE NO. 1.—

Furnishing Nitrogen

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE ALLENTOWN MANUFACTURING CO., ALLENTOWN, PA.	
8952	Victory Phosphate,	M. D. Kunkel, Stony Run,
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
9115	Bowker's Lawn & Garden Dressing, Revised,	Hoffman & Co., Lewistown,
8666	Bowker's Sure Crop Phosphate, Revised,	John M. Hafer, Stony Creek Mills,
8989	Bowker's Sure Crop Phosphate, Revised,	Russell James, Elverson,
9131	Bradley's B. D. Guano,	J. D. Box, Gravity,
8511	Bradley's B. D. Guano,	A. Krause & Son, Marwood,
8260	Bradley's B. D. Guano,	Charles McDowell, Mansfield,
9215	Bradley's Half Century Fertilizer, Revised,	Henry T. Rupp, Breinigsville,
9070	Bradley's King Philip, Revised,	A. L. Miller, Adelia,
8259	Bradley's New Method Fertilizer,	Charles McDowell, Mansfield,
8639	Bradley's New Method Fertilizer,	F. L. Miller, Edella,
9336	Bradley's Niagara Phosphate,	The Anderson Hardware Co., New Bethlehem.
8512	Bradley's Niagara Phosphate,	A. Krause & Son, Marwood,
9284	Bradley's Unicorn,	J. H. Campbell, Burlington,
9265	Bradley's Unicorn,	Wm. Jakalin, Willawana,
8638	Bradley's Unicorn,	F. L. Miller, Edella,
9146	Canton Chemical Baker's Fish Guano,	S. Carl Garner, Hatboro,
8797	Canton Chemical Baker's Standard High Grade Guano.	W. B. Winey, Middleburg,
9171	Canton Chemical Eagle Phosphate,	J. M. Hiltebeitel, Green Lane,
8515	Canton Chemical Harrow Brand Crop Grower.	William Gates Estate, Kittanning,
8446	Canton Chemical Harrow Brand Crop Grower.	Hartley & Blaine, Tudbotville,
8935	Canton Chemical Potato and Vegetable Manure.	Sharon Mills, Shinglehouse,
9147	Canton Chemical Resurgam Guano,	S. Carl Garner, Hatboro,
9011	Canton Chemical Resurgam Guano,	W. E. Wiley, Stewartstown,
8796	Canton Chemical Resurgam Guano,	W. B. Winey, Middleburg,
8102	Josiah Cope's Potato, Corn and Tobacco	Jones Eavenson, Christiana,
8104	Josiah Cope's Wheat and Grass Special,	Jones Eavenson, Christiana,
9288	Crocker's Complete Manure,	Farmers & Consumers Commercial Union, Troy.
8846	Crocker's Complete Manure,	Hartwell & Phillips Co., New Wilmington,
8716	Crocker's Complete Manure,	Smith, Metzgar, Wright & Co., Sheffield,
8749	Crocker's General Crop Fertilizer,	B. B. Wortz, Fairfield,
9287	Crocker's Harvest Jewell Fertilizer,	Farmers & Consumers Commercial Union, Troy.
9376	Crocker's Potato, Hop and Tobacco Fertilizer, Revised, 2-8-3.	Bovard Hardware Co., Atlantic,
8941	Crocker's Universal Grain Grower,	Emporium Supply Co., Emporium,
8847	Crocker's Universal Grain Grower,	Hartwell & Phillips, New Wilmington,
8659	Crocker's Universal Grain Grower,	Houck & Henry, Boyertown,
9020	Detrick's Corn and Oats Fertilizer,	A. M. Anstine, Glen Rock,
9021	Detrick's Imperial Compound.	A. M. Anstine, Glen Rock,
8411	Detrick's Kangaroo Komplete Kompound,	H. F. Gelbach, Evans City,
8551	W. S. Farmer's Fish Mixture,	Manifold & Wallace, High Rock,
8435	Great Eastern Garden Special,	Geo. H. Freyberger, Oley,
8225	Great Eastern General,	F. F. Hoffman Estate, Sadsburyville,
8965	Great Eastern Northern Corn Special, 1920,	Wm. J. Johnson, Sinking Springs,
9157	Great Eastern Special Crop Fertilizer, 1916,	Estate of Geo. H. Snyder, Hatfield,
9148	High Grade Crop Producer,	S. Carl Garner, Hatboro,
8558	Ludlam's Cecrops Harvest Queen,	Sechrist & Irig, York,
9094	Ludlam's Cecrops Standard Potash,	J. F. Ocker, Mifflintown,
8892	Matchless Potash Manure,	William B. Barnitz, Carlisle.
8838	Milsom's Buffalo Guano,	E. J. Eagley, West Springfield,

COMPLETE FERTILIZERS.

Phosphoric Acid and Potash.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
5.70	1.02	0.82	10.08	10.00	8.36	5.00	1.72	5.00	1.00	1.00	1.00	------	38 00	8952
6.70	2.85	2.47	10.33	10.00	9.14	9.00	1.19	1.00	2.09	2.00	2.09	------	65 00	9115
6.52	0.88	0.82	8.78	9.00	8.22	8.00	0.56	1.00	2.31	2.00	0.50	1.81	32 00	8666
6.00	0.88	0.82	9.38	9.00	8.74	8.00	0.64	1.00	2.21	2.00	------	2.21	39 00	8989
10.40	1.32	0.82	9.06	9.00	8.24	8.00	0.82	1.00	*3.14	4.00	3.14	------	43 00	9131
8.02	0.96	0.82	9.91	9.00	8.19	8.00	1.72	1.00	3.98	4.00	3.98	------	48 00	8511
11.62	0.95	0.82	9.18	9.00	8.36	8.00	0.82	1.00	3.88	4.00	3.88	------	46 00	8260
9.45	2.06	1.65	8.99	9.00	8.07	8.00	0.92	1.00	3.07	3.00	2.70	0.37	45 00	9215
6.42	1.10	0.82	10.27	10.00	9.22	9.00	1.05	1.00	2.94	2.00	2.60	0.34	40 00	9070
6.02	1.09	0.82	9.79	9.00	8.37	8.00	1.42	1.00	*1.78	2.00	0.60	1.18	40 00	8259
7.10	1.35	0.82	9.16	9.00	8.39	8.00	0.77	1.00	2.41	2.00	1.70	0.71	50 00	8639
5.95	0.95	0.82	8.74	8.00	6.89	7.00	1.85	1.00	1.19	1.00	0.50	0.69	38 00	9306
4.50	0.84	0.82	8.83	8.00	7.04	7.00	1.79	1.00	1.14	1.00	------	1.14	38 00	8512
5.82	1.66	1.65	10.65	9.00	9.60	8.00	1.05	1.00	2.00	2.00	0.70	1.30	44 00	9284
4.77	1.80	1.65	9.50	9.00	8.53	8.00	0.97	1.00	2.19	2.00	0.90	1.29	------	9265
6.68	1.89	1.65	9.72	9.00	8.73	8.00	0.99	1.00	2.25	2.00	1.10	1.15	52 00	8638
6.95	1.73	1.65	10.84	9.00	9.90	8.00	0.94	1.00	2.73	2.00	2.73	------	45 00	9146
7.67	1.90	1.65	9.61	9.00	*7.34	8.00	2.27	1.00	3.04	3.00	1.10	1.94	60 00	8797
6.12	1.10	0.82	9.50	8.00	8.70	7.00	0.80	1.00	4.02	1.00	4.02	------	37 00	9171
4.00	0.90	0.82	9.95	9.00	8.87	8.00	1.08	1.00	0.94	1.00	0.50	0.44	36 50	8515
5.10	0.90	0.82	9.06	9.00	*7.72	8.00	1.34	1.00	1.00	1.00	0.20	0 80	35 00	8446
6.75	0.92	0.82	10.40	10.00	*8.33	9.00	2.07	1.00	3.07	3.00	1.10	1.97	44 70	8935
5.35	1.23	0.82	8.99	9.00	8.42	8.00	0.57	1.00	4.38	4.00	4.38	------	45 00	9147
10.07	0.89	0.82	9.50	9.00	8.63	8.00	0.87	1.00	*3.63	4.00	3.63	------	40 00	9011
9.50	1.06	0.82	9.31	9.00	8.05	8.00	1.26	1.00	4.60	4.00	4.60	------	50 00	8796
9.52	1.85	1.65	9.10	9.00	8.08	8.00	1.02	1.00	4.40	4.00	4.40	------	51 00	8102
6.27	1.03	0.82	8.99	9.00	*7.56	8.00	1.43	1.00	1.08	1.00	------	1.08	36 00	8104
8.97	1.05	0.82	9.50	9.00	8.31	8.00	1.19	1.00	3.95	4.00	3.95	------	44 10	9288
7.87	0.85	0.82	10.04	9.00	8.06	8.00	1.98	1.00	4.38	4.00	3.60	0.78	45 00	8846
9.62	1.09	0.82	9.82	9.00	*7.77	8.00	2.05	1.00	4.49	4.00	4.49	------	57 00	8716
10.60	0.95	0.82	9.50	8.00	8.73	7.00	0.77	1.00	1.03	1.00	1.03	------	32 35	8749
6.45	1.87	1.65	10.27	9.00	8.31	8.00	1.96	1.00	2.11	2.00	0.50	1.61	44 10	9287
7.72	1.67	1.65	9.95	9.00	8.46	8.00	1.49	1.00	2.91	3.00	2.91	------	44 00	9376
7.82	1.05	0.82	10.01	9.00	7.84	8.00	2.17	1.00	1.97	2.00	1.97	------	55 00	8941
4.90	0.91	0.82	10.36	9.00	8.42	8.00	1.94	1.00	2.11	2.00	------	2.11	43 00	8847
8.05	0.88	0.82	8.61	9.00	8.04	8.00	0.57	1.00	2.03	2.00	2.03	------	39 00	8659
10.00	1.57	0.82	10.33	10.00	9.31	9.00	1.02	1.00	2.00	2.00	1.20	0.80	38 25	9020
8.75	1.00	0.82	9.57	9.00	8.55	8.00	1.02	1.00	2.07	2.00	------	2.07	37 50	9021
6.95	1.59	1.65	10.17	9.00	8.38	8.00	1.79	1.00	*2.80	3.00	2.50	0.30	50 00	8411
9.10	1.83	1.65	9.06	9.00	8.28	8.00	0.78	1.00	1.86	2.00	1.30	0.56	39 60	8551
12.15	*3.07	3.29	9.59	9.00	8.98	8.00	0.61	1.00	5.32	4.00	5.32	------	------	8435
7.75	1.08	0.82	9.40	9.00	8.49	8.00	0.91	1.00	4.04	4.00	4.04	------	39 50	8225
8.90	2.11	1.65	11.54	11.00	10.55	10.00	0.99	1.00	2.22	2.00	0.80	1.42	------	8965
5.37	1.85	0.82	9.69	11.00	*8.43	10.00	1.26	1.00	1.92	1.00	0.90	1.02	36 00	9157
6.70	1.99	1.65	9.38	9.00	8.49	8.00	0.89	1.00	4.80	4.00	4.80	------	51 00	9148
7.50	0.89	0.82	9.35	9.00	8.37	8.00	0.98	1.00	2.07	2.00	0.80	1.27	37 00	8558
8.25	1.05	0.82	9.57	9.00	8.29	8.00	1.28	1.00	4.00	4.00	4.00	------	40 90	9094
9.65	1.91	1.65	9.31	9.00	7.89	8.00	1.42	1.00	2.22	2.00	2.22	------	42 00	8892
9.77	0.89	0.82	9.95	9.00	8.65	8.00	1.30	1.00	4.46	4.00	4.46	------	43 50	8838

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*Deficient.

TABLE 1.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
9314	Milsom's Erie King Fertilizer,	McCanley & McKay, Brockwayville,
8933	Milsom's Erie King Fertilizer,	Sharon Mills, Shinglehouse,
9377	Milsom's Wheat, Oats and Barley,	W. A. Bright, Greenville,
9186	Milsom's Wheat, Oats and Barley,	Uriah Schmell, Plumsteadville,
8934	Milsom's Wheat, Oats and Barley.	Sharon Mills, Shinglehouse,
9114	Moro-Phillips' C. & G. Complete Fertilizer,	J. I. Goss, Painterville,
9033	Moro-Phillips' C. & G. Complete Fertilizer,	Nathan Hunsicker, Andreas,
8472	Moro-Phillips' Farmers Phosphate,	R. W. Daub, Muir,
8471	Moro-Phillips' Poatto and Truck Manure,	R. W. Daub, Muir,
8994	Moro-Phillips' Pure Phuine,	I. M. Heyburn, Brandywine Summit,
9345	Moro-Phillips' Standard Guano.	Wm. A. Nickles, Shippensburg,
8331	Moro-Phillips' Standard Guano,	F. S. Shenberger, Red Lion,
8893	Nassau General Favorite,	William B. Barnitz, Carlisle,
9281	Nassau Potato Manure,	Farmers Alliance, Franklin Forks,
9188	Nassau Practical Fertilizer,	Ira Burgstresser, Ottsville,
8304	Nassau Practical Fertilizer,	J. S. Hershberger, Everett,
8711	Northwestern Complete Compound.	F. R. Jennings, Tidioute,
8833	Packer's Union Potato Manure, 1920,	Union Produce Co., Union City,
8295	Packer's Union Universal Fertilizer, 1920.	S. C. Exline, Imler,
8224	Packer's Union Universal Fertilizer, 1920,	F. F. Hoffman Estate, Sadsburyville,
8241	Packer's Union Universal Fertilizer, 1920.	J. Harold Long Milling Co., Flemington,
9268	Patapsco Coon Brand Guano, 1916, Revised,	C. E. Hanlon, Ridgebury,
9269	Patapsco Vegetable and Corn Fertilizer,	C. E. Hanlon, Ridgebury,
9242	Patapsco Vegetable and Corn Fertilizer,	Joseph L. Sandt, Easton,
8223	Perkin's Special Bono Manure,	Jerome H. Tingley, Coatesville,
8660	Read's High Grade Farmers Friend, Revised.	S. M. Grim, Paxatannia,
8986	Reese's Ammoniated Phosphate Mixture,	Clayton Evans, Chester Springs,
9201	Reese's Ammoniated Phosphate Mixture,	David A. Hein, Wescosville,
8982	Reese's Challenge Crop Grower,	Harry Wilson, Frazer,
8179	Reese's Half and Half,	A. M. Rabenstine, Hanover,
8985	Reese's Mayflower,	Clayton Evans, Chester Springs,
8171	Reese's Mayflower,	A. M. Rabenstine, Hanover,
8987	Reese's Potato Manure, Revised,	Clayton Evans, Chester Springs,
8820	Reese's Potato Manure, Revised,	Edwin Gearhart, Richfield,
8984	Reese's Truck Special,	Clayton Evans & Brother, Chester Springs,
8772	Schall-Sheldon's Farmers' Favorite,	J. E. Jackson, Everett,
9058	Sharpless & Carpenter Fish Guano Special,	J. Kunkle & Son, Orwigsburg,
9055	Sharpless & Carpenter Potato, Corn and Truck Guano, Revised.	J. Kunkle & Son, Orwigsburg,
9056	Sharpless & Carpenter Potato Manure,	J. Kunkle & Son, Orwigsburg,
9057	Sharpless & Carpenter Soluble Tampico Guano, Revised.	J. Kunkle & Son, Orwigsburg,
9267	Special Potato Manure,	Wm. Jakalin, Willawana,
9278	Special Potato Manure,	J. C. Leighton, Tunkhannock,
9071	Special Potato Manure,	A. L. Miller, Adelia,
8467	Susquehanna Potato and Tobacco Phosphate.	Walter Brown, Muir,
8468	Susquehanna Sure Crop,	Walter Brown, Muir,
9062	Tygert-Allen's Standard Crop Grower,	A. H. Knell, Friedensburg,
8473	Whann's Chester Valley Potato Special,	S. Ells Schwalm, Valley View,
8672	Whann's Chester Valley Special Ammoniated Superphosphate, Revised.	Paradise Farmers Association, Vintage,
8673	Whann's Chester Valley Tomata and Potato Special.	Paradise Farmers Association, Vintage,
8294	Wheeler's Potato Manure, 1920,	S. C. Exline, Imler,
8573	Williams & Clark's Elk Brand,	J. S. Moore & Son, Oakdale,
8426	Williams & Clark's Elk Brand,	Wm. S. Schaeffer, Leesport,
8725	Williams & Clark's Matchless Fertilizer,	McHenry & Masteller, Bloomsburg,
8572	Williams & Clark's Prolific Fertilizer,	J. S. Moore & Son, Oakdale,
8726	Williams & Clark's Royal Phosphate, Revised.	McHenry & Masteller, Bloomsburg,
8574	Williams & Clark's Royal Phosphate, Revised.	J. S. Moore & Son, Oakdale,

FERTILIZERS—Continued.

	NITROGEN.		PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.							
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
3.35	0.95	0.82	8.44	8.00	6.88	7.00	1.56	1.00	0.94	1.00	0.20	0.74	38 00	9314
3.70	1.31	0.82	8.80	8.00	7.04	7.00	1.76	1.00	1.08	1.00	------	1.08	37 00	8933
5.65	1.11	0.82	9.89	9.00	8.04	8.00	1.85	1.00	2.04	2.00	0.90	1.14	40 00	9377
5.27	1.41	0.82	8.90	9.00	8.22	8.00	0.77	1.00	2.07	2.00	0.80	1.27	33 75	9186
8.55	1.08	0.82	9.57	9.00	*7.53	8.00	2.04	1.00	2.17	2.00	1.60	0.57	40 50	8934
8.70	0.96	0.82	9.38	9.00	8.26	8.00	1.12	1.00	2.09	2.00	0.80	1.29	33 00	9114
5.00	1.14	0.82	8.74	9.00	7.95	8.00	0.79	1.00	3.04	2.00	1.12	1.92	-------	9033
4.90	1.18	0.82	8.57	8.00	7.55	7.00	1.02	1.00	1.22	1.00	0.30	0.92	40 00	8472
8.85	2.64	2.47	10.31	10.00	9.53	9.00	0.78	1.00	2.50	2.00	2.50	------	55 00	8471
8.90	1.72	1.65	9.18	9.00	8.55	8.00	0.63	1.00	3.22	3.00	1.70	1.52	47 00	8994
8.02	1.15	0.82	9.54	9.00	8.51	8.00	1.03	1.00	*3.33	4.00	3.33	------	42 00	9345
10.00	0.89	0.82	8.99	9.00	7.84	8.00	1.15	1.00	*3.74	4.00	3.74	------	41 00	8331
7.22	1.03	0.82	9.12	9.00	8.34	8.00	0.78	1.00	4.31	4.00	4.31	------	42 00	8893
10.27	2.43	1.65	11.35	9.00	10.41	8.00	0.94	1.00	*1.88	4.00	1.20	0.68	48 00	9281
5.15	1.12	0.82	8.10	8.00	7.11	7.00	0.99	1.00	1.03	1.00	------	1.03	36 00	9188
8.10	0.90	0.82	8.67	8.00	7.23	7.00	1.44	1.00	1.24	1.00	------	1.24	36 00	8304
8.45	0.98	0.82	10.01	9.00	7.88	8.00	2.13	1.00	4.58	4.00	4.58	------	50 00	8711
8.85	2.40	2.47	8.78	9.00	*7.67	8.00	1.11	1.00	4.25	4.00	4.25	------	59 00	8833
5.42	0.86	0.82	9.14	9.00	*7.67	8.00	1.47	1.00	1.16	1.00	------	1.16	36 00	8295
6.75	1.13	0.82	9.54	9.00	8.66	8.00	0.88	1.00	1.14	1.00	0.50	0.64	30 75	8224
7.00	0.82	0.82	9.12	9.00	8.51	8.00	0.61	1.00	0.82	1.00	0.82	------	35 25	8241
5.65	1.20	0.82	11.42	10.00	9.85	9.00	1.57	1.00	1.09	1.00	0.40	0.69	36 50	9268
9.95	2.22	1.65	10.40	9.00	8.24	8.00	2.16	1.00	4.00	4.00	4.00	------	48 00	9269
10.52	1.77	1.65	10.59	9.00	8.00	8.00	2.59	1.00	4.30	4.00	4.30	------	48 00	9242
5.37	0.95	0.82	9.37	9.00	8.03	8.00	1.34	1.00	1.02	1.00	0.20	0.82	-------	8223
5.57	3.29	3.29	8.76	9.00	8.43	8.00	0.33	1.00	4.66	4.00	4.66	------	60 00	8660
8.82	1.09	0.82	9.78	10.00	8.85	9.00	0.93	1.00	3.09	3.00	0.60	2.49	39.50	8986
7.82	1.13	0.82	9.69	10.00	8.87	9.00	0.82	1.00	3.22	3.00	2.00	1.22	40 00	9201
8.67	1.18	0.82	9.44	9.00	8.45	8.00	0.99	1.00	2.05	2.00	1.70	0.35	39 00	8982
6.62	1.15	0.82	9.77	8.00	8.09	7.00	1.68	1.00	1.00	1.00	0.20	0.80	32 25	8176
7.92	1.83	1.65	8.80	9.00	*7.59	8.00	1.21	1.00	2.64	2.00	2.30	0.34	41 00	8985
10.25	1.65	1.65	9.25	9.00	8.10	8.00	1.15	1.00	2.66	2.00	2.10	0.56	40 25	8171
6.92	1.85	1.65	8.74	9.00	*7.54	8.00	1.20	1.00	3.45	3.00	3.45	------	44 00	8987
8.77	1.68	1.65	9.57	9.00	8.13	8.00	1.44	1.00	3.12	3.00	3.12	------	47 00	8820
10.87	2.37	2.47	8.67	9.00	7.87	8.00	0.80	1.00	4.73	4.00	1.80	2.93	52 00	8984
8.70	0.88	0.82	9.21	9.00	8.13	8.00	1.08	1.00	2.00	2.00	------	2.00	38.00	8772
9.40	2.36	1.65	10.52	11.00	*9.73	10.00	0.79	1.00	2.60	2.00	2.60	------	42 00	9058
7.60	1.99	1.65	9.89	9.00	8.69	8.00	1.20	1.00	2.10	2.00	0.80	1.30	40 00	9055
11.05	2.64	2.47	9.18	9.00	8.27	8.00	0.91	1.00	4.29	4.00	4.29	------	52 00	9056
11.75	*2.90	3.29	8.61	9.00	8.01	8.00	0.60	1.00	4.54	4.00	4.54	------	-------	9057
9.95	2.67	2.47	9.69	9.00	8.21	8.00	1.48	1.00	4.19	4.00	3.60	0.59	-------	9267
10.77	2.71	2.47	9.50	9.00	8.73	8.00	0.77	1.00	4.32	4.00	4.32	------	-------	9278
7.32	3.13	2.47	10.08	9.00	9.06	8.00	1.02	1.00	4.21	4.00	4.21	------	60 00	9071
7.60	1.57	1.65	9.38	9.00	8.69	8.00	0.69	1.00	3.32	3.00	3.32	------	45 00	8467
8.05	0.95	0.82	10.08	10.00	9.24	9.00	0.84	1.00	0.94	1.00	0.50	0.44	35 00	8468
8.60	1.91	0.82	8.74	9.00	8.09	8.00	0.65	1.00	4.45	4.00	4.45	------	41 50	9062
7.55	1.86	1.65	9.73	9.00	8.00	8.00	1.73	1.00	3.89	4.00	3.89	------	-------	8473
6.62	1.10	0.82	9.61	9.00	8.81	8.00	0.80	1.00	0.84	1.00	0.30	0.54	33 50	8672
8.20	0.89	0.82	8.89	9.00	8.19	8.00	0.70	1.00	4.57	4.00	4.57	------	41 25	8673
9.37	1.71	1.65	9.82	9.00	7.84	8.00	1.98	1.00	2.88	3.00	1.00	1.88	48 30	8294
8.97	1.13	0.82	10.14	9.00	8.21	8.00	1.93	1.00	3.83	4.00	3.83	------	46 50	8573
8.55	1.37	0.82	11.94	9.00	9.39	8.00	2.55	1.00	*2.40	4.00	1.70	0.70	42 50	8426
7.85	1.80	1.65	9.61	9.00	8.62	8.00	0.99	1.00	2.13	2.00	1.00	1.13	45 00	8725
5.25	1.10	0.82	9.12	8.00	7.16	7.00	1.96	1.00	1.10	1.00	0.50	0.60	36 50	8572
6.67	0.93	0.82	9.67	9.00	8.43	8.00	1.24	1.00	2.14	2.00	------	2.14	39 00	8726
4.12	1.00	0.82	10.20	9.00	8.13	8.00	2.07	1.00	2.00	2.00	------	2.00	41 00	8574

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*Deficient.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
8425	Williams & Clark's Royal Phosphate, Revised.	Wm. S. Schaeffer, Leesport,
8578	Zell's Ammoniated Superphosphate,	D. A. Hankey, Parnassus,
8332	Zell's Ammoniated Superphosphate,	F. S. Shenberger, Red Lion,
8819	Zell's Economizer Phosphate,	Edwin Gearhart, Richfield,
8581	Zells' Economizer Phosphate,	D. A. Hankey, Parnassus,
8330	Zell's Economizer Phosphate,	F. S. Shenberger, Red Lion,
8329	Zell's Hustler Phosphate,	G. B. Murphey, Red Lion,
8580	Zell's Little Treasure,	D. A. Hankey, Parnassus,
	THE AMERICAN AGRICULTURAL CHEMICAL CO., THE POLLOCK FERTILIZER CO., BRANCH, BALTIMORE, MD.	
8782	Pollock's Corn and Oats Special,	H. O. Andrews, Mapleton Depot,
8289	Pollock's Corn and Oats Special,	Blackburn Milling Co., Cessna,
8774	Pollock's Corn and Oats Special,	Irvin Earnest, Point,
9233	Pollock's Corn, Wheat and Tomato Guano,	John Green, Hellertown,
	AMERICAN FERTILIZING COMPANY, BALTIMORE, MD.	
8689	American Best Potato Formula,	Musselman Brothers, New Holland,
8326	American Emergency Special Compound,	H. W. Burg, East Prospect,
8690	American Fish and Bone Compound,	Musselman Brothers, New Holland,
8324	American Reliable Guano,	H. W. Burg, East Prospect,
8912	American Reliable Guano,	Quarryville Farmers Association, Quarryville.
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.	
8906	Cereal Special No. 2,	Long & Co., Lititz,
8397	Cereal Special No. 3,	Frank Douglass, Indiana,
9061	Crop Grower,	James A. Heffner, Friedensburg,
8704	Crop Grower,	Smith Brothers, Ridgway,
8582	Crop Grower,	A. J. Steele, Latrobe,
8395	Fruit and Root Crop Special,	Frank Douglass, Indiana,
8247	Fruit and Root Crop Special,	Ellis W. Hyman, Jersey Shore,
9239	Fruit and Root Crop Special,	Nazareth Coal & Lumber Co., Nazareth,
9353	Grain Grower,	John H. Brooks, Beaver Falls,
8396	Grain Grower,	Frank Douglass, Indiana,
8907	Grain Grower,	Long & Co., Lititz,
9150	Potato and Vegetable Special,	T. B. McElhatten, Hatboro,
9240	Royal Ammoniated,	Nazareth Coal & Lumber Co., Nazareth,
8516	Tuscarora Ammoniated Phosphate,	William Gates Estate, Kittanning,
8601	Tuscarora Standard Phosphate,	Elmer Danenberger, Huntingdon Valley,
8518	Tuscarora Standard Phosphate,	William Gates Estate, Kittanning,
8905	Wheat, Corn and Oats Special,	Long & Co., Lititz,
9181	Wheat, Corn and Oats Special,	Harry C. Moyer, Blooming Glen,
8488	Wheat, Corn and Oats Special,	H. A. Smith, Lehighton,
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.	
8153	Honest Crop Grower,	J. S. Knisely, Red Lion,
	BAUGH & SONS COMPANY, PHILADELPHIA, PA.	
8362	Baugh's Animal Base and Potash Compound.	E. B. Fritz & Sons Co., Quarryville,
8235	Baugh's Animal Base and Potash Compound.	John F. Long, Flemington,
9217	Baugh's Animal Base and Potash Compound.	John J. Peter, Breinigsville,
8301	Baugh's Complete Animal Base Fertilizer,	Francis Baker, Everett,
8335	Baugh's Complete Animal Base Fertilizer,	Cook Grain, Feed & Supply Co., Dillsburg.
8203	Baugh's Complete Animal Base Fertilizer,	Thomas, Haines Co., Malvern,
8358	Baugh's Excelsior Guano,	E. B. Fritz & Sons Co., Quarryville,

FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
5.50	0.89	0.82	8.78	9.00	7.90	8.00	0.88	1.00	2.10	2.00	0.50	1.60	37 50	8425
8.70	1.85	1.65	9.38	9.00	8.12	8.00	1.26	1.00	2.28	2.00	1.10	1.18	47 00	8578
10.85	1.74	1.65	9.41	9.00	8.16	8.00	1.25	1.00	1.94	2.00	1.50	0.44	41 00	8332
8.77	0.89	0.82	9.20	9.00	8.21	8.00	0.99	1.00	2.00	2.00	1.10	0.90	38 25	8819
9.50	1.30	0.82	10.65	9.00	9.71	8.00	0.94	1.00	2.14	2.00	1.00	1.14	41 00	8581
9.10	1.28	0.82	8.71	9.00	*7.73	8.00	0.98	1.00	1.92	2.00	0.80	1.12	35 00	8330
10.50	0.84	0.82	10.14	10.00	9.62	9.00	0.52	1.00	3.00	3.00	3.00	------	39 00	8329
4.72	1.23	0.82	8.13	8.00	6.89	7.00	1.24	1.00	1.00	1.00	1.00	------	37 00	8580
5.42	0.82	0.82	8.29	8.00	*6.63	7.00	1.66	1.00	1.10	1.00	------	1.10	35 00	8782
5.65	0.88	0.82	7.87	8.00	*6.36	7.00	1.51	1.00	0.97	1.00	0.20	0.77	24 30	8289
4.77	1.00	0.82	8.36	8.00	6.94	7.00	1.42	1.00	1.04	1.00	------	1.04	28 00	8774
3.92	1.10	0.82	9.31	9.00	8.23	8.00	1.08	1.00	1.55	1.00	------	1.55	35 00	9233
7.80	3.37	3.29	9.39	9.00	8.56	8.00	0.83	1.00	7.40	6.00	7.40	------	67 00	8689
8.10	0.40	0.41	7.87	8.00	6.89	7.00	0.98	1.00	1.08	1.00	1.08	------	33 00	8326
9.35	1.90	1.65	9.72	9.00	*7.42	8.00	2.30	1.00	4.32	3.00	4.32	------	46 00	8690
9.92	0.85	0.82	9.85	9.00	8.46	8.00	1.39	1.00	1.10	1.00	1.10	------	33 00	8324
5.27	1.10	0.82	10.74	9.00	9.53	8.00	1.21	1.00	1.25	1.00	1.25	------	33 35	8912
10.72	1.64	1.65	11.03	10.50	10.19	10.00	0.84	0.50	4.05	4.00	2.60	1.45	55 00	8906
11.00	1.95	1.65	12.82	12.50	*11.46	12.00	1.36	0.50	1.92	2.00	1.92	------	49 00	8397
11.20	1.16	0.82	8.67	8.50	7.84	8.00	0.83	0.50	2.11	2.00	2.11	------	38 00	9061
3.50	0.88	0.82	9.57	8.50	8.66	8.00	0.91	0.50	*1.65	2.00	------	1.65	50 00	8704
6.05	1.44	0.82	8.74	8.50	7.92	8.00	0.82	0.50	1.97	2.00	1.97	------	41 00	8582
9.00	1.74	1.65	9.24	8.50	8.04	8.00	1.20	0.50	5.00	5.00	5.00	------	54 00	8395
9.62	1.71	1.65	9.37	8.50	8.55	8.00	0.82	0.50	*4.70	5.00	2.10	2.60	51 75	8247
2.12	1.78	1.65	8.99	8.50	7.98	8.00	1.01	0.50	*4.01	5.00	4.01	------	51 90	9239
10.47	1.75	1.65	9.53	8.50	8.14	8.00	1.39	0.50	2.25	2.00	2.25	------	48 00	9353
9.25	1.65	1.65	9.69	8.50	8.25	8.00	1.44	0.50	2.44	2.00	2.44	------	45 00	8396
9.65	1.85	1.65	9.35	8.50	8.39	8.00	0.96	0.50	2.29	2.00	2.29	------	45 00	8907
6.17	3.48	3.29	10.08	8.50	8.26	8.00	1.82	0.50	4.01	4.00	4.01	------	62 25	9150
4.65	0.85	0.82	8.74	8.50	*7.75	8.00	0.99	0.50	4.59	4.00	4.59	------	43 15	9240
6.52	0.97	0.82	7.73	7.50	6.95	7.00	0.78	0.50	1.20	1.00	1.20	------	35 50	8516
6.45	1.79	1.65	9.17	8.50	8.30	8.00	0.87	0.50	2.20	2.00	2.20	------	44 00	8601
9.25	1.80	1.65	9.50	8.50	8.24	8.00	1.26	0.50	2.34	2.00	2.34	------	46 00	8518
7.72	0.89	0.82	8.23	7.50	7.04	7.00	1.19	0.50	1.17	1.00	1.17	------	35 00	8905
6.42	0.98	0.82	8.10	7.50	7.11	7.00	0.99	0.50	1.26	1.00	1.26	------	38 00	9181
5.25	0.89	0.82	7.36	7.50	*6.62	7.00	0.74	0.50	1.06	1.00	1.06	------	35 00	8488
3.82	0.99	0.82	8.70	8.00	7.42	7.00	1.28	1.00	1.18	1.00	0.30	0.88	35.33	8153
11.05	1.74	1.65	8.90	8.00	8.25	8.00	0.65	------	*1.72	2.00	1.72	------	42 50	8362
5.00	1.74	1.65	9.62	8.00	8.09	8.00	1.53	------	2.20	2.00	2.20	------	39 00	8235
7.67	2.03	1.65	8.36	8.00	8.02	8.00	0.34	------	2.22	2.00	2.22	------	42 50	9217
10.00	1.54	1.65	9.03	8.00	8.07	8.00	0.96	------	5.03	5.00	5.03	------	54 00	8301
11.17	1.63	1.65	9.65	8.00	8.25	8.00	1.40	------	*4.40	5.00	4.40	------	50 50	8335
8.97	1.73	1.65	8.15	8.00	*7.78	8.00	0.37	------	4.90	5.00	4.90	------	54 00	8203
9.50	1.10	0.82	8.88	8.00	8.24	8.00	0.64	------	4.18	4.00	4.18	------	43 50	8358

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*Deficient.

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
8187	Baugh's Excelsior Guano,	O. W. Shortlidge, Lincoln University,
9122	Baugh's Excelsior Guano,	F. R. Varcol, Waymarth,
9038	Baugh's Fish Mixture,	Thos. Garrison, Berwick,
8618	Baugh's General Crop Grower,	B. E. & J. F. Cokley, Scranton,
8360	Baugh's General Crop Grower,	E. B. Fritz & Sons Co., Quarryville,
8400	Baugh's General Crop Grower,	P. J. Oesterling & Son, Butler,
9264	Baugh's Grand Rapid High Grade Guano,	Farmers Cooperative Union, Athens,
9007	Baugh's Grand Rapid High Grade Guano,	W. E. Manifold, Fawn Grove,
8995	Baugh's Grand Rapid High Grade Guano,	Richards & Schraeder, Concordville,
8439	Baugh's Peruvian Guano Substitute,	Bottinger & Wargo, Danville,
8354	Baugh's Peruvian Guano Substitute,	J. H. Brinton, Gap,
8761	Baugh's Peruvian Guano Substitute,	E. S. Minnich, Brillhart,
9050	Baugh's Special Potato Manure,	A. W. Berkheiser, Auburn,
9326	Baugh's Special Potato Manure,	Edwards Hardware Co., Edensburg,
9263	Baugh's Special Potato Manure,	Farmers Cooperative Union, Athens,
	BERGER BROTHERS, EASTON, PA.	
9248	Lehigh Superphosphate, 1920,	Berger Brothers, Easton,
	BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
8938	Bowker's All Round Fertilizer,	Bunker & Burdic, Millport,
8713	Bowker's Corn and Grain Grower,	M. E. Beshlin, Warren,
9087	Bowker's Corn and Grain Grower,	J. B. Dyamond, Waymarth,
9332	Bowker's Hill and Drill Phosphate,	H. L. Stultz & Brother, Altoona,
8405	Bowker's Lawn and Garden Dressing, 1918,	H. J. Klinger & Co., Butler,
8850	Bowker's Potash Fertilizer,	Marshall Brothers, New Castle,
8500	Bowker's Potash Fertilizer,	Mars Milling & Feed Co., Mars,
8712	Bowker's Square Brand Farm and Garden Phosphate.	M. E. Beshlin, Warren,
9040	Bowker's Square Brand Farm and Garden Phosphate.	William Lutz, Berwick,
9086	Bowker's Staple Phosphate,	J. B. Dyamond, Waymarth,
8501	Bowker's Staple Phosphate,	Mars Milling & Feed Co., Mars,
9075	Bowker's Sure Crop Phosphate, Revised,	George Chichura, Olyphant,
9286	Bowker's Sure Crop Phosphate, Revised,	H. M. Spaulding Son, Troy,
9331	Bowker's Sure Crop Phosphate, Revised,	H. L. Stultz & Brother, Altoona,
	S. B. BRODBECK, BRODBECKS, PA.	
8768	Brodbeck's Reliable,	M. W. Brodbeck, Brodbecks,
	THE CENTRAL CHEMICAL COMPANY, HAGERSTOWN, MD.	
8173	Crown Jewell,	J. S. Phillips, Littlestown,
8939	Eclipse Brand,	E. J. Davis & Co., Shinglehouse,
8519	Golden Sheaf,	Charley Davis, Middlebury,
9229	Golden Sheaf,	Oliver DeLong, Slatington,
9109	Golden Sheaf,	R. O. Rhine, East Waterford,
8479	Grain and Grass Grower,	James Adams, Weatherly,
9227	Grain and Grass Grower,	Oliver DeLong, Slatington,
8527	Valley Mixture,	C. S. Chamberlin, Sabinsville,
9226	Valley Mixture,	Oliver DeLong, Slatington,
	THE CHESAPEAKE CHEMICAL CO., BALTIMORE, MD.	
9005	Chesapeake 1-7-4 Fertilizer,	H. W. Rehmeyer, Turnpike,

FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
9.17	2.00	0.82	8.42	8.00	*7.12	8.00	1.30	-------	4.12	4.00	4.12	------	45 00	8187
9.10	1.08	0.82	8.61	8.00	8.19	8.00	0.42	-------	3.90	4.00	3.90	------	50 00	9122
9.25	1.70	1.65	8.99	8.00	8.07	8.00	0.92	-------	2.53	2.00	2.53	------	42 00	9038
11.95	1.06	0.82	9.57	8.00	9.06	8.00	0.51	-------	1.34	1.00	1.34	------	42 00	8618
10.75	1.00	0.82	8.99	8.00	8.39	8.00	0.60	-------	1.04	1.00	1.04	------	34 00	8360
8.67	0.87	0.82	9.25	8.00	8.61	8.00	0.64	-------	1.68	1.00	1.68	------	48 00	8400
10.52	2.30	2.47	8.99	8.00	7.97	8.00	1.02	-------	*2.70	3.00	2.70	------	60 00	9264
11.05	2.41	2.47	8.67	8.00	7.82	8.00	0.85	-------	2.93	3.00	2.50	0.43	51 00	9007
12.17	2.31	2.47	9.63	8.00	8.92	8.00	0.71	-------	*2.60	3.00	0.70	1.90	52 25	8995
10.55	*3.27	4.12	8.97	6.00	7.89	6.00	1.08	-------	*4.36	5.00	4.36	------	70 00	8439
6.15	4.23	4.12	7.71	6.00	7.02	6.00	0.69	-------	5.06	5.00	5.06	------	65 50	8354
10.05	*3.42	4.12	8.10	6.00	7.07	6.00	1.03	-------	*4.52	5.00	4.52	------	70 00	8761
8.15	1.90	1.65	8.48	8.00	7.85	8.00	0.63	-------	5.43	5.00	5.43	------	53 00	9050
9.45	1.81	1.65	8.80	8.00	8.25	8.00	0.55	-------	5.27	5.00	5.27	------	56 00	9326
10.90	1.67	1.65	8.78	8.00	7.93	8.00	0.85	-------	4.90	5.00	4.90	------	56 00	9263
9.90	0.99	0.82	10.84	10.00	9.91	9.00	0.93	1.00	3.00	3.00	2.10	0.90	43 00	9248
8.47	2.60	2.47	9.06	9.00	7.96	8.00	1.10	1.00	4.09	4.00	2.60	1.49	60 00	8938
8.65	1.14	0.82	10.17	9.00	8.41	8.00	1.76	1.00	4.07	4.00	4.07	------	50 00	8713
5.80	1.13	0.82	10.24	9.00	9.13	8.00	1.11	1.00	4.18	4.00	3.90	0.28	40 00	9087
8.35	*1.87	2.47	10.08	10.00	8.91	9.00	1.17	1.00	2.23	2.00	2.23	------	55 00	9332
3.15	2.63	2.47	20.66	9.00	*7.10	8.00	13.56	1.00	1.22	1.00	0.50	0.72	68 00	8405
9.90	0.94	0.82	10.91	10.00	9.33	9.00	1.58	1.00	3.16	3.00	3.16	------	50 00	8850
9.85	0.98	0.82	10.33	10.00	*8.75	9.00	1.58	1.00	3.74	3.00	3.74	------	45 00	8500
7.22	1.58	1.65	9.76	9.00	8.22	8.00	1.54	1.00	2.02	2.00	2.02	------	50 00	8712
7.82	1.97	1.65	10.27	9.00	9.08	8.00	1.19	1.00	2.11	2.00	------	2.11	-------	9040
5.67	1.40	0.82	11.03	9.00	9.75	8.00	1.28	1.00	1.00	1.00	1.00	------	40 00	9086
3.75	1.29	0.82	9.71	9.00	*7.71	8.00	2.00	1.00	1.18	1.00	------	1.18	38 00	8501
6.90	0.98	0.82	9.82	9.00	8.75	8.00	1.07	1.00	1.82	2.00	1.82	------	39 00	9075
10.10	1.05	0.82	9.89	9.00	8.74	8.00	1.15	1.00	1.86	2.00	1.86	------	42 00	9286
7.30	1.03	0.82	9.31	9.00	8.29	8.00	1.02	1.00	2.11	2.00	0.80	1.31	45 00	9331
7.27	0.63	0.41	10.01	9.00	8.12	8.00	1.89	1.00	1.11	1.00	1.11	------	30 00	8768
7.07	0.79	0.82	10.05	-------	9.53	9.00	0.52	-------	*2.46	3.00	2.46	------	39 60	8173
11.02	1.49	1.65	10.78	-------	*9.49	10.00	1.29	-------	3.14	3.00	1.80	1.34	46 00	8939
8.42	0.88	0.82	8.60	-------	7.92	8.00	0.68	-------	1.26	1.00	1.26	------	36 00	8519
9.07	1.32	0.82	8.67	-------	8.06	8.00	0.61	-------	1.38	1.00	1.38	------	32 50	9229
4.92	1.24	0.82	9.44	-------	8.19	8.00	1.25	-------	1.24	1.00	1.24	------	36 00	9109
10.72	1.66	1.65	12.95	-------	11.93	12.00	1.02	-------	*1.58	2.00	1.58	------	-------	8479
10.62	1.66	1.65	13.90	-------	12.42	12.00	1.48	-------	2.01	2.00	0.60	1.41	44 20	9227
7.32	*1.18	1.65	9.44	-------	8.74	8.00	0.70	-------	2.14	2.00	2.14	------	44 00	8527
12.25	*1.43	1.65	9.50	-------	9.02	8.00	0.48	-------	2.22	2.00	2.22	------	40 80	9226
10.87	0.83	0.82	8.87	8.00	8.81	7.00	0.06	1.00	*3.28	4.00	2.50	0.78	40 00	9005

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*Deficient.

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE COE MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
8647	E. Frank Coe's Celebrated Special Potato Fertilizer, Revised.	A. .F Wentzel, Lorane,
8636	E. Frank Coe's Columbian Corn and Potato Fertilizer.	Abington Lumber Co., Dalton,
8644	E. Frank Coe's Corn King,	A. F. Wentzel, Lorane,
8821	E. Frank Coe's Gold Brand Excelsior Guano, Revised.	A. L. Goodling, Richfield,
8646	E. Frank Coe's Gold Brand Excelsior Guano, Revised.	A. F. Wentzel, Lorane,
8162	E. Frank Coe's Knickerbocker Phosphate,	V. J. Bortner, Windsor,
8163	E. Frank Coe's New Englander Special,	V. J. Bortner, Windsor,
8645	E. Frank Coe's New Englander Special,	A. F. Wentzel, Lorane,
8311	E. Frank Coe's Pennsylvania No. 1 Grain Special, 1916.	Ward & Morris, Clearville,
	COLUMBIA GUANO COMPANY, ALLIED WITH F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
8438	Columbia Capital Guano,	J. P. Fisher, Douglassville,
9166	Columbia Capital Guano,	John W. Root, Kimberton,
8623	Columbia Good Will Guano,	G. R. Clark, Scranton,
8642	Columbia Good Will Guano,	J. P. Fisher, Douglassville,
9167	Columbia Good Will Guano,	John W. Root, Kimberton,
9145	Columbia Prize Guano,	C. E. Gantzhorn, Farmersville,
9304	Columbia Prize Guano,	John Gardner, Millville,
	THE CONSUMERS CHEMICAL CORPORATION, AFFILIATED WITH VIRGINIA-CAROLINA CHEMICAL CO. OF DELAWARE, NEW YORK, N. Y.	
8631	Great Gardner Brand,	F. L. Thompson, Clarks Summit,
8634	Old Hickory Brand,	F. L. Thompson, Clarks Summit,
8944	Oxbow Brand,	E. H. Hays, Clintondale,
	THE JAS. G. DOWNWARD CO., COATESVILLE, PA.	
8199	Pioneer Potato Phosphate,	M. S. Bailey, Malvern,
8198	Potato, Corn and Grain Phosphate,	M. S. Bailey, Malvern,
9400	Royal Phosphate,	Brown & Rea, Quarryville,
8125	Royal Phosphate,	A. G. Lehman, Palmyra,
	DUBOIS FERTILIZER WORKS, INC., DUBOIS, PA.	
8798	DuBois Corn Special,	C. L. Bowersox, Middleburg,
8497	DuBois Grain Grower Fertilizer,	H. F. Gelbach, Evans City,
8498	DuBois Potato and Truck,	H. F. Gelbach, Evans City,
	AMOS EBY & CO., LEAMAN PLACE, PA.	
8115	Farmers Mixture,	S. Clayton Rauck, Leaman Place,
8118	Pequa High Grade,	S. Clayton Rauck, Leaman Place,
8120	Pequa Special Potato,	S. Clayton Rauck, Leaman Place,
8119	Pequa Valley Fertilizer,	S. Clayton Rauck, Leaman Place,
	EUREKA CHEMICAL COMPANY, BALTIMORE, MD.	
8165	Eureka Corn and Potato,	Manchester Cooperative Association, Emigsville.
9015	Eureka Corn and Potato,	E. Paules, York,
8166	Eureka Fish and Potash,	Manchester Cooperative Association, Emigsville.

FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
12.55	3.37	3.29	9.59	9.00	9.35	8.00	0.24	1.00	5.86	4.00	5.86	------	------	8647
7.67	2.17	1.65	9.69	9.00	8.41	8.00	1.28	1.00	*2.64	3.00	2.64	------	45 00	8636
9.67	2.84	2.47	9.38	10.00	*8.61	9.00	0.77	1.00	2.07	2.00	0.70	1.37	------	8644
9.20	2.91	2.47	9.25	9.00	8.10	8.00	1.15	1.00	4.09	4.00	4.09	------	52 00	8821
12.20	2.95	2.47	8.64	9.00	7.98	8.00	0.66	1.00	4.00	4.00	4.00	------	------	8646
8.42	1.86	1.65	8.56	9.00	8.20	8.00	0.36	1.00	2.04	2.00	0.70	1.34	40 40	8162
9.00	0.93	0.82	9.44	9.00	8.33	8.00	1.11	1.00	2.15	2.00	1.80	0.35	35 74	8163
9.00	0.89	0.82	8.04	9.00	*7.49	8.00	0.55	1.00	2.10	2.00	2.10	------	------	8645
7.27	0.96	0.82	11.35	11.00	9.97	10.00	1.38	1.00	1.12	1.00	1.12	------	37 25	8311
4.82	0.87	0.82	9.18	8.50	7.84	8.00	1.34	0.50	2.26	2.00	2.26	------	40 00	8438
8.85	1.55	0.82	9.76	8.50	8.14	8.00	1.62	0.50	1.94	2.00	1.94	------	42 00	9166
9.09	0.97	0.82	8.74	8.50	8.04	8.00	0.70	0.50	1.12	1.00	1.12	------	38 00	8623
7.60	0.87	0.82	8.29	8.50	*7.13	8.00	1.16	0.50	1.01	1.00	1.01	------	37 00	8642
7.85	0.82	0.82	10.27	8.50	8.76	8.00	1.51	0.50	1.01	1.00	1.01	------	38 00	9167
9.30	1.80	1.65	9.38	8.50	7.98	8.00	1.40	0.50	5.39	5.00	5.39	------	50 00	9145
10.30	1.55	1.65	9.63	8.50	8.05	8.00	1.58	0.50	6.10	5.00	6.10	------	52 00	9304
9.20	3.23	3.29	9.63	9.00	8.20	8.00	1.43	1.00	4.00	4.00	4.00	------	60 00	8631
9.15	1.80	1.65	8.52	9.00	8.18	8.00	0.34	1.00	3 34	3.00	0.60	2.74	45 00	8634
8.55	0.84	0.82	10.10	9.00	8.38	8.00	1.72	1.00	1.29	1.00	------	1.29	34 85	8944
9.32	*1.75	2.46	8.04	11.00	*7.62	10.00	0.42	1.00	2.10	2.00	------	2.10	50 00	8199
9.80	1.98	1.65	8.80	11.00	*8.33	10.00	0.47	1.00	*1.12	2.00	------	1.12	44 00	8198
8.22	1.16	0.82	11.54	11.00	11.27	10.00	0.27	1.00	1.32	1.00	------	1.32	36 00	9400
11.17	0.88	0.82	7.99	11.00	*6.27	10.00	1.72	1.00	1.08	1.00	0.20	0.88	36 00	8125
7.19	0.67	0.82	10.59	9.00	8.00	8.00	2.59	1.00	2.30	1.50	------	2.30	35 20	8798
8.20	1.23	0.82	7.77	8.00	7.39	7.00	0.38	1.00	2.07	1.00	------	2.07	35 00	8497
7.65	*1.27	1.65	10.40	9.00	8.33	8.00	2.07	1.00	2.68	2.00	------	2.68	45 00	8498
4.25	0.65	0.41	6.85	7.00	*5.64	6.00	1.21	1.00	1.20	0.50	1.20	------	28 00	8115
8.02	2.70	2.89	7.61	8.00	*5.71	6.00	1.90	2.00	2.24	2.00	2.24	------	53 00	8118
7.20	1.85	1.65	9.72	10.00	*7.70	8.00	2.02	2.00	4.82	4.00	4.82	------	51 00	8120
8.62	1.75	1.65	10.97	12.00	*9.44	10.00	1.53	2.00	2.26	2.00	2.26	------	46 00	8119
8.50	0.97	0.82	9.95	9.50	9.04	9.00	0.91	0.50	3.00	3.00	0.70	2.30	39 25	8165
6.90	0.86	0.82	10.33	9.50	9.25	9.00	1.08	0.50	3.23	3.00	3.23	------	------	9015
6.35	0.46	0.41	8.84	8.50	8.01	8.00	0.83	0.50	2.23	2.00	2.23	------	33 00	8166

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*Deficient.

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
8778	Eureka Fish and Potash,	W. H. Nesbit, McConnellsburg,
9168	Eureka Fish and Potash,	Frank Rees, Phoenixville,
8164	Eureka Potato and Vegetable,	Manchester Cooperative Association, Emigsville.
	THE FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.	
8908	Farmers Tobacco Special,	I. B. Graybill, Refton,
8337	Pride of Donegal,	H. H. Martin, Manheim,
8338	Special Compound,	H. H. Martin, Manheim,
8340	Special Potato and Tobacco Manure,	H. H. Martin, Manheim,
	THE FERTILE CHEMICAL CO., CLEVELAND, OHIO.	
8585	Nitro-Fertile,	Theo. M. Hammer, Greensburg,
	JOSEPH R. GAWTHROP, KENNETT SQUARE, PA.	
8175	Special Potato Phosphate,	Joseph R. Gawthrop, Kennett Square,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
8564	Economizer,	W. A. Diehl, New Oxford,
8955	Economizer,	A. L. Hartman, Schaefferstown,
9290	Economizer,	F. J. Klein, Danville,
8413	Farmers Potato Manure,	John I. Clay, Palmyra,
8730	Farmers Potato Manure,	Houck & Cherrington, Catawissa,
8190	Farmers Potato Manure,	Passmore & Co., Nottingham,
8732	Fish, Bone and Potash,	Houck & Cherrington, Catawissa,
8189	Fish, Bone and Potash,	Passmore & Co., Nottingham,
8410	Nitro Crop Feeder,	Harmony Cereal Mills, Harmony,
9398	Peerless Fertilizer,	J. G. Hall, New Providence,
9397	Reliable Crop Grower,	J. G. Hall, New Providence,
9294	Reliable Crop Grower,	Cornelius Harmon, Montgomery,
8408	Reliable Crop Grower,	Harmony Cereal Mills, Harmony,
8565	Royal Potash Guano,	W. A. Diehl, New Oxford,
8409	Royal Potash Guano,	Harmony Cereal Mills, Harmony,
8447	Royal Potash Guano,	Hartley & Blaine, Turbotville,
8412	Spring Crop Grower,	John I. Clay, Palmyra,
	S. M. HESS & BROTHER, INC., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.	
9358	Farmers General Fertilizer, 1916,	N. S. Ringer, Fredonia,
8272	Potato Crop Grower,	Samuel Buffington, Sacramento,
8384	Potato Crop Grower,	A. E. Eisenhower, Lewisburg,
9357	Special Compound,	N. S. Ringer, Fredonia,
8434	Special Compound,	Geo. W. Ruth, Alburtis,
8504	Special Corn Manure,	Geo. H. Baker, Valencia,
8148	Special Corn Manure,	John D. Gibble, Lebanon,
8385	Special Corn Manure,	J. R. Iddings, Mifflinburg,
8792	Superior Potato Manure,	Walter A. Beck, Warriors Mark,
8147	Superior Potato Manure,	John Gibble, Lebanon,
8775	Wheat and Grass Manure,	W. D. Hoover, Fishertown,
	P. HOFFMAN & BROTHER, RAUBSVILLE, PA.	
9249	Hoffman's Special,	P. Hoffman & Brother, Raubsville,
	M. P. HUBBARD CO., INC., BALTIMORE, MD.	
8611	Hubbard's Acme,	Mackey & Yerkes, Oxford,
9002	Hubbard's Special Potato and Tomato,	J. P. Shuchart, New Freedom,

FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
7.85	0.51	0.41	9.41	8.50	8.56	8.00	0.85	0.50	2.01	2.00	2.01	------	31 00	8778
5.32	0.61	0.41	8.48	8.50	*7.61	8.00	0.87	0.50	2.52	2.00	2.52	------	37 00	9168
7.10	1.67	1.64	10.97	10.50	*9.77	10.00	1.20	0.50	4.18	4.00	0.80	3.38	48 50	8164
10.50	4.10	4.10	6.00	5.00	4.58	4.00	1.42	1.00	6.02	5.00	------	6.02	76 00	8908
11.65	*1.34	1.65	7.74	8.00	7.20	7.00	0.54	1.00	2.92	3.00	2.92	------	45 00	8337
10.50	0.95	0.82	9.25	9.00	8.20	8.00	1.05	1.00	2.04	2.00	2.04	------	35 00	8338
9.65	2.42	2.47	7.48	7.00	6.77	6.00	0.71	1.00	10.12	10.00	10.12	------	70 00	8340
63.85	†2.56	2.00	†3.35	3.00	†3.35	3.00	------	------	†4.59	3.00	2.49	2.10	10 oz. †35c	8585
6.40	0.97	0.80	7.02	6.00	6.52	5.00	0.50	1.00	1.14	1.00	1.14	------	33 00	8175
8.10	0.72	0.41	7.91	7.00	6.75	6.00	1.16	1.00	2.12	1.00	2.12	------	28 75	8564
6.32	0.79	0.41	8.80	7.00	7.33	6.00	1.47	1.00	0.90	1.00	0.90	------	33 00	8955
7.35	0.73	0.41	7.53	7.00	6.48	6.00	1.05	1.00	0.95	1.00	0.95	------	------	9290
5.12	1.03	0.82	9.16	9.00	8.20	8.00	0.96	1.00	6.44	6.00	6.44	------	48 76	8413
7.97	0.89	0.82	8.67	9.00	7.85	8.00	0.82	1.00	6.10	6.00	6.10	------	51 75	8730
11.15	0.85	0.82	9.34	9.00	8.78	8.00	0.56	1.00	6.02	6.00	1.40	4.62	52 00	8190
7.90	1.60	1.45	7.49	8.00	6.89	7.00	0.60	1.00	2.08	2.00	2.08	------	43 50	8732
9.75	1.51	1.45	8.14	8.00	7.51	7.00	0.63	1.00	*1.64	2.00	1.64	------	43 00	8189
4.90	6.50	6.60	5.55	4.50	5.18	4.00	0.37	0.50	2.62	2.00	2.62	------	75 00	8410
8.37	0.62	0.41	9.89	9.00	9.19	8.00	0.70	1.00	2.11	2.00	2.11	------	34 25	9398
6.32	1.20	0.82	8.80	9.00	*7.47	8.00	1.33	1.00	1.53	1.00	1.53	------	34 25	9397
11.32	1.16	0.82	10.08	9.00	9.28	8.00	0.80	1.00	*0.43	1.00	0.20	0.23	33 25	9294
8.75	0.90	0.82	9.48	9.00	8.84	8.00	0.64	1.00	1.24	1.00	1.24	------	33 50	8408
8.07	1.04	0.82	9.41	9.00	8.10	8.00	1.31	1.00	4.93	4.00	4.93	------	42 00	8565
5.60	0.95	0.82	8.61	9.00	8.18	8.00	0.43	1.00	4.56	4.00	4.56	------	42 00	8409
8.00	0.88	0.82	9.35	9.00	8.69	8.00	0.66	1.00	*3.40	4.00	3.40	------	-43 50	8447
7.60	*1.12	1.65	8.29	7.50	7.69	6.50	0.60	1.00	*4.22	4.50	4.22	------	48 96	8412
9.67	1.05	0.82	12.12	11.00	*9.72	10.00	2.40	1.00	1.07	1.00	1.07	------	36 50	9358
11.57	2.54	1.65	8.61	9.00	8.04	8.00	0.57	1.00	4.00	4.00	4.00	------	48 00	8272
9.72	1.47	1.65	8.93	9.00	8.00	8.00	0.93	1.00	4.00	4.00	4.00	------	------	8384
10.15	0.98	0.82	9.38	9.00	8.07	8.00	1.31	1.00	4.15	4.00	4.15	------	------	9357
8.27	0.93	0.82	9.25	9.00	8.43	8.00	0.82	1.00	4.06	4.00	4.06	------	------	8434
4.75	0.97	0.82	10.20	9.00	8.15	8.00	2.05	1.00	1.86	2.00	------	1.86	40 50	8504
6.24	1.39	0.82	8.84	9.00	7.95	8.00	0.89	1.00	2.44	2.00	0.80	1.64	39 00	8148
4.42	0.80	0.82	9.41	9.00	8.12	8.00	1.29	1.00	*1.70	2.00	------	1.70	37 00	8385
8.47	*1.70	3.29	9.75	9.00	*7.53	8.00	2.22	1.00	*2.92	4.00	0.90	2.02	61 00	8792
10.90	3.39	3.29	8.87	9.00	8.18	8.00	0.69	1.00	4.34	4.00	1.20	3.14	66 00	8147
8.17	0.83	0.82	9.18	9.00	8.07	8.00	1.11	1.00	2.20	2.00	------	2.20	------	8775
4.87	1.04	0.82	13.78	10.00	7.10	7.00	6.68	3.00	2.95	3.00	2.95	------	36 00	9249
9.00	1.14	0.82	8.99	9.00	8.49	8.00	0.50	1.00	4.18	4.00	4.18	------	45 00	8611
10.00	1.63	1.65	8.36	8.00	8.03	7.00	0.33	1.00	4.92	5.00	2.60	2.32	49 00	9002

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*Deficient.

†Excluded from average.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE HUBBARD FERTILIZER COMPANY, BALTIMORE, MD.	
8321	Hubbard's Climax Phosphate,	Crentz Creek Valley Farmers Cooperative Association, York.
8811	Hubbard's English Compound,	J. W. Klingler, Middlecreek,
9328	Hubbard's Fish and Potash Mixture,	J. E. Crisman, South Fork,
8957	Hubbard's Fish and Potash Mixture,	J. R. Meck, Meckville,
8314	Hubbard's Fish and Potash Mixture,	J. Emory Moul, Ironore,
9110	Hubbard's Improved Guano,	Wm. Atkinson, McVeytown,
9054	Hubbard's Standard Phosphate,	Geo. Seltzer, Orwigsburg,
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.	
8258	I. A. C. Potato and Vegetable,	Decker & Cook, Mansfield,
	THE JARECKI CHEMICAL COMPANY, SANDUSKY, OHIO.	
8885	Lake Erie Guano with Phosphate and Potash.	Alvie Ralya, Conneaut Lake,
9371	Lake Erie Guano with Phosphate and Potash.	Wildrick & Wildrick, Hartstown,
9369	Little Giant,	Wildrick & Wildrick, Hartstown,
8825	Tobacco and Truck Grower,	Alvie Ralya, Conneaut Lake,
9370	Tobacco and Truck Grower,	Wildrick & Wildrick, Hartstown,
	KEYSTONE BONE FERTILIZER CO., PHILADELPHIA, PA.	
8494	Keystone Corn and Cereal Grower,	Arthur Kemerer, Lehigbton,
	KOLLER FERTILIZER CO., SEITZLAND, PA.	
8999	Koller's Potato Grower Phosphate,	Summit Lumber Co., New Freedom,
9000	Koller's Super Ammoniated Phosphate,	Summit Lumber Co., New Freedom,
	LANCASTER BONE FERTILIZER COMPANY, LANCASTER, PA.	
8217	Lancaster Harvest King,	Wm. Albright, Cochranville,
8269	Lancaster Harvest King,	Ellsworth Erdman, Klingerstown,
8686	Lancaster Harvest King,	Elias R. Hess, Bareville,
8216	Lancaster Potato and Fruit Vegetable,	Wm. Albright, Cochranville,
8155	Lancaster Potato and Fruit Vegetable,	Josiah Flinchbaugh, Windsor,
8687	Lancaster Potato and Fruit Vegetable,	Elias R. Hess, Bareville,
8685	Potato, Tobacco and Truck Manure,	Elias R. Hess, Bareville,
	LANCASTER CHEMICAL COMPANY, LANCASTER, PA.	
9117	No. 2 Dewey Brand,	The Western Penitentiary, Bellefonte,
8230	No. 18 Success Brand,	Morris Bunting & Brother, Oxford,
8533	No. 18 Success Brand,	Ben Gutgsell, Germania,
9068	No. 18 Success Brand,	Elias Morgan, Pine Grove,
8534	No. 19 Potato Special,	Ben Gutgsell, Germania,
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
8548	Levan's Farmers Favorite,	H. W. Burg, East Prospect,
8279	Levan's Farmers Favorite,	Hegins Grange, Hegins,
8948	Levan's Farmers Favorite,	A. D. Trexler Sons, Trexler,
8374	Levan's Golden Sheaf, 1-8-1,	D. W. Geiss, Bellefonte,
8889	Levan's Golden Sheaf, 1-8-1,	C. F. Gelbach, Duncannon,
8278	Levan's Golden Sheaf, 1-8-1,	Hegins Grange, Hegins,
8547	Levan's Lebanon Special,	H. W. Burg, East Prospect,
8280	Levan's Lebanon Special,	Hegins Grange, Hegins,
8968	Levan's Lebanon Special,	Lebanon Fertilizer Works, Lebanon,
8277	Levan's Special Tobacco Compound, 2-10-4,	Hegins Grange, Hegins,

FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
8.40	1.14	0.82	8.01	8.00	7.26	7.00	0.75	1.00	4.98	4.00	4.98	------	39 22	8321
5.90	0.94	0.82	11.48	9.00	10.66	8.00	0.82	1.00	*0.72	1.00	0.72	------	35.05	8811
6.50	0.85	0.41	9.06	9.00	*7.40	8.00	1.66	1.00	2.81	2.00	2.81	------	37 75	9328
5.85	0.53	0.41	8.74	9.00	8.10	8.00	0.64	1.00	2.21	2.00	2.21	------	35 00	8957
6.75	0.69	0.41	8.89	9.00	*7.61	8.00	1.28	1.00	2.40	2.00	2.40	------	34 25	8314
7.32	1.73	1.64	10.91	11.00	10.08	10.00	0.83	1.00	1.81	2.00	1.81	------	48 00	9110
8.55	1.58	1.64	9.50	9.00	8.17	8.00	1.33	1.00	4.28	3.00	4.28	------	-------	9054
8.20	*1.75	2.50	11.60	9.00	9.30	8.00	2.30	1.00	3.04	3.00	3.04	------	54 25	8258
10.75	1.18	0.82	12.14	12.00	*10.72	11.00	1.42	1.00	1.00	1.00	------	1.00	-------	8885
10.02	0.98	0.82	12.82	12.00	11.60	11.00	1.22	1.00	1.53	1.00	------	1.53	38 00	9371
7.25	0.58	0.41	12.95	11.00	11.14	10.00	1.81	1.00	0.93	1.00	0.20	0.73	34 00	9369
13.12	0.95	0.82	9.64	9.00	8.54	8.00	1.10	1.00	*1.59	2.00	1.59	------	38 00	8825
7.57	1.00	0.82	8.48	9.00	*7.79	8.00	0.69	1.00	*1.79	2.00	------	1.79	38 00	9370
4.40	2.34	1.65	10.20	9.00	8.41	8.00	1.79	1.00	1.88	2.00	0.60	1.26	-------	8494
6.75	0.92	0.82	10.59	7.50	8.88	7.00	1.71	0.50	2.83	2.00	1.80	1.03	32 50	8909
10.67	*1.38	1.65	11.48	8.50	9.77	8.00	1.71	0.50	2.17	2.00	1.50	0.67	40 00	9000
8.35	0.25	Tr.	10.87	11.00	10.35	10.00	0.52	1.00	*3.71	4.00	3.71	------	38 00	8217
6.42	0.08	Tr.	10.39	11.00	*9.24	10.00	1.15	1.00	*3.59	4.00	------	3.59	37 50	8269
5.25	0.30	Tr.	10.61	11.00	*9.69	10.00	0.92	1.00	*3.78	4.00	3.78	------	42 00	8686
5.75	0.88	0.82	9.40	9.00	8.61	8.00	0.79	1.00	1.20	1.00	1.20	------	33 50	8216
7.82	0.89	0.82	8.74	9.00	8.01	8.00	0.73	1.00	1.26	1.00	0.40	0.86	-------	8155
7.65	0.85	0.82	8.87	9.00	8.05	8.00	0.82	1.00	1.00	1.00	1.00	------	37 00	8687
10.07	1.60	1.60	9.16	9.00	8.50	8.00	0.66	1.00	1.73	1.00	1.73	------	40 00	8685
7.82	1.27	1.23	10.10	9.00	8.91	8.00	1.19	1.00	*1.57	2.00	------	1.57	40 00	9117
7.45	*0.50	0.82	9.13	9.00	8.02	8.00	1.11	1.00	*2.33	4.00	------	2.33	45 00	8230
7.75	0.88	0.82	10.18	9.00	8.79	8.00	1.39	1.00	*2.32	4.00	2.10	0.22	-------	8533
10.65	1.10	0.82	9.38	9.00	*7.34	8.00	2.04	1.00	5.32	4.00	0.70	4.62	-------	9068
8.10	1.58	1.65	10.72	10.00	9.30	9.00	1.42	1.00	*2.16	3.00	------	2.16	-------	8534
7.80	0.78	0.82	8.33	9.00	7.85	8.00	0.48	1.00	2.18	2.00	0.90	1.28	36 00	8548
9.65	0.93	0.82	7.55	9.00	*7.08	8.00	0.47	1.00	2.50	2.00	1.40	1.10	33 50	8279
8.10	0.88	0.82	8.36	9.00	8.03	8.00	0.33	1.00	2.08	2.00	------	2.08	37 00	8948
7.52	0.90	0.82	8.46	9.00	8.04	8.00	0.42	1.00	1.24	1.00	0.70	0.54	33 94	8374
6.00	1.00	0.82	8.58	9.00	8.26	8.00	0.32	1.00	1.09	1.00	------	1.09	33 00	8889
10.25	0.98	0.82	7.46	9.00	*7.13	8.00	0.33	1.00	1.52	1.00	------	1.52	31 90	8278
10.70	*1.29	1.65	8.71	9.00	8.28	8.00	0.43	1.00	2.07	2.00	------	2.07	42.00	8547
10.25	1.55	1.65	8.52	9.00	8.20	8.00	0.32	1.00	2.04	2.00	0.80	1.24	38 90	8280
10.72	1.61	1.65	8.80	9.00	8.42	8.00	0.38	1.00	2.01	2.00	------	2.01	-------	8968
11.10	1.60	1.65	9.50	11.00	*9.16	10.00	0.34	1.00	5.08	4.00	4.80	0.28	47 00	8277

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*Deficient.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
8419	Levan's Special Tobacco Compound, 2-10-4,	A. G. Houtz, Myerstown,
9295	Levan's Special Tobacco Compound, 2-10-4,	Solomon & Waltz, Antes Fort,
8141	Levan's Trucker's Favorite,	Aaron B. Grubb, Palmyra,
	LISTER'S AGRICULTURAL CHEMICAL WORKS, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEWARK, N. J.	
8841	Lister's Corn and Potato Fertiltzer,	J. R. Hanks, Springboro,
8727	Lister's Corn and Potato Fertilizer,	McHenry & Masteller, Bloomsburg,
8506	Lister's Corn and Potato Fertilizer,	Morrow & Buxton, Valencia,
8900	Lister's Fish Brand Fertilizer,	Hirom Overly, East Earl,
8842	Lister's G. Brand,	J. R. Hanks, Springboro,
8508	Lister's G. Brand,	Morrow & Buxton, Valencia,
8901	Lister's G. Brand,	Hirom Overly, East Earl,
8379	Lister's Golden Sheaf,	R. Foster, Mifflinburg,
8509	Lister's Golden Sheaf,	Morrow & Buxton, Valencia,
8448	Lister's Golden Sheaf,	B. Savidge, Turbotville,
8632	Lister's Harvest Queen Phosphate, Revised,	E. J. Hull, Olyphant,
9388	Lister's Harvest Queen Phosphate, Revised,	J. Frank Lutz, Stevens,
8801	Lister's Special Crop Producer,	I. C. Gearhart, Middleburg,
9013	Lister's Special Crop Producer,	W. L. Mitzel, Red Lion,
9235	Lister's Special Crop Producer,	R. D. Sames, Coopersburg,
8378	Lister's Special Potato Fertilizer,	R. Foster, Mifflinburg,
9285	Lister's Squirrel Brand Fertilizer,	J. R. Jones, East Troy,
8507	Lister's Squirrel Brand Fertilizer,	Morrow & Buxton, Valencia,
8902	Lister's Standard Pure Super Phosphate of Lime.	Hirom Overly, East Earl,
8555	Lister's Success Fertilizer,	Grove & Uffelman, Brogueville,
8237	Lister's Valley Brand Fertilizer,	Kencht Milling Co., Mill Hall,
8475	Lister's Wheat and Rye Fertilizer,	Ralph Froh, Weatherly,
	THE MAPES FORMULA & PERUVIAN GUANO CO., NEW YORK, N. Y.	
8276	The Mapes Potato Manure,	P. H. Updegrave, Valley View,
8273	The Mapes Tobacco Starter, Improved,	P. H. Updegrave, Valley View,
	THE MARTIN FERTILIZER CO., PHILADELPHIA, PA.	
9065	Martin's Bull Head Fertilizer,	John Reed, Cressona,
9066	Martin's Corn and Cereal Special,	John Reed, Cressona,
9067	Martin's Dissolved Organic Compound,	John Reed, Cressona,
9003	Martin's Dissolved Organic Compound,	H. W. Rehmeyer, Turnpike,
8993	Martin's Special Compound,	R. C. Fairlamb & Sons, Brandywine Summit.
9004	Martin's Special Compound,	H. W. Rehmeyer, Turnpike,
	FREDRICK MEHRING FERTILIZER WORKS, BALTIMORE, MD.	
8313	Frederick Mehring Fertilizer Works Big 4 Crop Grower.	E. Chas. Matthias, Littlestown,
	THE MILLER FERTILIZER CO., BALTIMORE, MD.	
8333	Miller's Ammoniated,	G. W. Bomberger, Etters,
8783	Miller's Harvest Queen,	A. S. Welsh, Mt. Union,
8755	Miller's Hustler Phosphate,	Burtus Eisenhart, East Berlin,
8179	Miller's Hustler Phosphate,	M. T. Harkins, Hickory Hill,
8132	Miller's Hustler Phosphate,	N. R. Yost, Myerstown,
8756	Miller's Potato and Vegetable Grower,	Burtus Eisenhart, East Berlin,
8131	Miller's Potato and Vegetable Grower,	N. R. Yost, Myerstown,
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
8343	N. A. C. Brand Potato Formula, 4-8-4,	J. C. Walker & Sons Co., Gap,

FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Total.		Available.		Insoluble.		Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
			Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.						
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
12.15	1.84	1.65	9.68	11.00	*9.46	10.00	9.22	1.00	4.66	4.00	1.90	2.76	------	8419
12.00	1.50	1.65	10.01	11.00	*9.69	10.00	0.32	1.00	*3.70	4.00	2.00	1.70	51.00	9295
11.10	*2.13	2.47	11.99	13.00	*11.72	12.00	0.27	1.00	3.56	3.00	2.90	0.66	52 00	8141
7.42	2.25	1.65	10.63	9.00	8.07	8.00	2.56	1.00	3.22	3.00	------	3.22	47 50	8841
9.77	1.71	1.65	9.44	9.00	*7.42	8.00	2.02	1.00	3.00	3.00	1.00	2.00	48 50	8727
9.40	1.50	1.65	9.67	9.00	8.74	8.00	0.93	1.00	*2.76	3.00	2.76	------	48 00	8506
9.42	0.93	0.82	10.08	10.00	9.01	9.00	1.07	1.00	2.08	2.00	1.50	0.58	------	8900
8.77	0.89	0.82	10.50	9.00	8.68	8.00	1.82	1.00	4.70	4.00	4.70	------	44 50	8842
8.10	0.95	0.82	9.85	9.00	8.15	8.00	1.70	1.00	4.16	4.00	4.16	------	45 00	8508
9.80	1.09	0.82	9.25	9.00	8.18	8.00	1.07	1.00	4.00	4.00	4.00	------	------	8901
5.72	0.77	0.82	9.50	9.00	8.19	8.00	1.31	1.00	1.02	1.00	------	1.02	35 50	8379
8.75	0.98	0.82	9.31	9.00	8.65	8.00	0.66	1.00	1.12	1.00	0.20	0.92	37 50	8509
8.67	0.88	0.82	8.80	9.00	7.86	8.00	0.94	1.00	0.98	1.00	0.98	------	34 25	8448
7.67	1.06	0.82	10.75	10.00	9.83	9.00	0.92	1.00	*2.66	3.00	0.50	2.16	42 00	8632
8.72	1.10	0.82	10.52	10.00	9.27	9.00	1.25	1.00	3.07	3.00	3.07	------	43 50	9388
3.22	1.03	0.82	8.29	8.00	6.90	7.00	1.39	1.00	1.09	1.00	------	1.09	34 00	8801
9.42	0.87	0.82	9.31	8.00	8.40	7.00	0.91	1.00	1.16	1.00	1.16	------	34 00	9013
6.67	1.33	0.82	8.10	8.00	7.17	7.00	0.93	1.00	1.05	1.00	0.30	0.75	36 00	9235
7.40	3.45	3.29	10.41	10.00	9.36	9.00	1.05	1.00	1.46	1.00	1.46	------	54 00	8378
8.07	1.10	0.82	11.10	9.00	9.25	8.00	1.85	1.00	*1.80	2.00	0.60	1.20	39 00	9285
6.25	0.93	0.82	10.59	9.00	9.70	8.00	0.89	1.00	*1.48	2.00	------	1.48	40 00	8507
11.10	2.54	2.47	9.44	10.00	*8.04	9.00	1.40	1.00	2.17	2.00	2.17	------	------	8902
7.95	1.56	1.65	8.97	9.00	8.18	8.00	0.79	1.00	1.86	2.00	1.86	------	------	8555
5.50	0.93	0.82	11.54	11.00	10.33	10.00	1.21	1.00	0.96	1.00	0.96	------	39 00	8237
12.75	1.96	1.65	12.34	11.00	11.01	10.00	1.33	1.00	2.04	2.00	1.60	0.44	45 00	8475
8.25	3.53	3.71	8.20	8.00	6.89	7.00	1.31	1.00	5,96	5.00	5.96	------	67 00	8276
8.00	4.26	4.12	8.61	8.00	*4.68	6.00	3.93	2.00	1.44	1.00	0.60	0.84	57 00	8273
7.55	*2.13	2.47	10.40	9.00	8.72	8.00	1.68	1.00	4.12	3.00	3.20	0.92	51 00	9065
7.32	1.78	1.65	10.59	9.00	8.66	8.00	1.93	1.00	2.76	2.00	2.76	------	42 00	9066
11.25	1.08	0.82	11.35	10.00	10.55	9.00	0.80	1.00	*2.53	3.00	2.53	------	40 50	9067
11.12	0.84	0.82	10.59	10.00	9.05	9.00	1.54	1.00	*2.50	3.00	2.50	------	39 00	9003
13.60	1.89	1.64	10.59	9.00	9.29	8.00	1.30	1.00	*3.68	5.00	1.50	2.18	55 00	8993
12.25	1.93	1.64	10.08	9.00	8.46	8.00	1.62	1.00	5.44	5.00	2.30	3.14	50 00	9004
9.99	0.96	0.82	10.46	------	9.03	9.00	1.43	------	2.34	2.00	1.90	0.44	34 50	8313
8.25	1.59	1.65	9.18	8.50	7.99	8.00	1.19	0.50	1.94	2.00	1.94	------	43 50	8333
9.62	0.82	0.82	11.03	9.50	10.01	9.00	1.02	0.50	*2.75	3.00	2.75	------	42 00	8783
7.10	0.92	0.82	9.06	8.50	8.32	8.00	0.74	0.50	1.08	1.00	0.90	0.18	40 25	8755
5.65	0.93	0.82	8.48	8.50	7.98	8.00	0.50	0.50	1.10	1.00	1.10	------	32 50	8179
6.75	0.85	0.82	9.06	8.50	8.29	8.00	0.77	0.50	1.03	1.00	1.03	------	34 75	8132
6.00	1.62	1.65	10.14	9.50	9.00	9.00	1.14	0.50	3.03	3.00	3.03	------	45 75	8756
8.00	1.57	1.65	10.14	9.50	9.21	9.00	0.93	0.50	3.40	3.00	3.40	------	46 75	8131
8.67	3.19	3.29	9.02	9.00	8.42	8.00	0.60	1.00	4.08	4.00	4.08	------	62 00	8343

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*Deficient.

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	G. OBER & SONS COMPANY, BALTIMORE, MD.	
8192	Ober's Stag Guano,	Edw. W. Rupert, Oxford,
	PATAPSCO GUANO COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
9367	Coon Brand Guano, 1916,	Levi Baer, Greenville,
8577	Coon Brand Guano, 1916,	Stockdale Hardware Co., Tarentum.
8787	Patapsco B. B. & P. Brand, Revised,	Ross E. Goodman, Huntingdon,
9291	Patapsco Big Chief Brand with Potash,	W. E. Boyer, Mooresburg,
8319	Patapsco Big Cbief Brand with Potash,	J. C. Ernst & Co., York,
9333	Patapsco Grain and Grass Producer,	K. L. McClain & Co., Tyrone,
9334	Patapsco Money Maker,	K. L. McClain & Co., Tyrone,
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.	
8099	Levering's Ammoniated Bone,	H. E. Mullin, Christiana,
9318	Levering's Excelsior,	A. F. Stutzman & Sons, Johnstown,
8100	Levering's Harvest Queen,	H. E. Mullin, Christiana,
8904	Levering's Standard,	Milton M. Wenger, Bareville,
8554	Piedmont Farmers Favorite,	C. J. Saylor Estate, Felton,
8886	Piedmont Insula Fish Guano,	Hershey Store Co., Hershey,
8553	Piedmont Insula Fish Guano,	C. J. Saylor Estate, Felton,
9230	Piedmont Insula Fish Guano,	Amandus W. Wotring, Schneeksville,
8964	Piedmont Perfection Guano,	Wm. J. Johnson, Sinking Springs,
8784	Piedmont Perfection Guano,	John G. Simpson, Huntingdon,
8903	Piedmont Perfection Guano,	Milton M. Wenger, Bareville,
	RASIN-MOUNMENTAL COMPANY, BALTIMORE, MD.	
8232	Rasin's Best Crop Formula,	Oxford Grain & Hay Co., Oxford,
8463	Rasin's Best Potato Formula,	H. B. Low & Son, Orangeville,
8700	Rasin's Best Potato Formula,	Leonard Ritter, St. Marys,
8741	Rasin's Capital Crop Compound,	Simon Carl, Numidia,
8368	Rasin's Capital Crop Compound,	Chester McCormick, State College,
8703	Rasin's Capital Crop Compound,	Leonard Ritter, St. Marys,
9100	Rasin's Half and Half Special,	Kidder & Raymond, Oak Hall Station,
8562	Rasin's Half and Half Special,	J. D. Markle, Hanover,
8771	Rasin's Half and Half Special,	A. G. Taylor, Glenville,
9205	Rasin's Royal Fish, Bone and Potash,	Henry K. Mohr, Quakertown,
8381	Rasin's Royal Manure,	S. B. Miller, Mifflinburg,
9203	Rasin's Royal Manure,	Henry K. Mohr, Quakertown,
8451	Rasin's Royal Manure,	H. A. Snyder, Strawberry Ridge,
9204	Rasin's Wheat, Corn and Oats Mixture,	Henry K. Mohr, Quakertown,
	READING BONE FERTILIZER CO., READING, PA.	
8719	Blood, Meat and Potash Mixture,	James Hackett, Smethport,
9244	Farmers Tankage and Potash for Corn, Grain and Grass.	Geo. W. Dilliard, Bethlehem,
9178	Farmers Tankage and Potash for Corn, Grain and Grass.	R. C. Frable, Pleasant Valley,
8128	Reading 4-8- and 6,	S. M. Kline, Lebanon,
9052	Reading 4-8- and 6,	Morris Moyer, Schuylkill Haven,
8129	Reading One Eight and Five,	S. M. Kline, Lebanon,
	READING CHEMICAL COMPANY, READING, PA.	
8244	Old Standard,	H. L. McCloskey, Beech Creek,
8268	Old Standard,	Society of Equity, Rough and Ready,
9342	Tankage and Potash Mixture,	M. R. Brumbaugh, Martinsburg,
9034	Tankage and Potash Mixture,	Davis & Fine, Wilkes-Barre,
9125	Tankage and Potash Mixture,	Peter A. Drake, Waymarth,

FERTILIZERS—Continued.

	NITRO-GEN.		PHOSPHORIC ACID.						POTASH.					
			Total.		Available.		Insoluble.							
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
6.90	1.19	0.82	10.14	10.00	9.25	9.00	0.89	1.00	*3.62	4.00	1.30	2.32	45 00	8192
6.87	0.93	0.82	10.72	10.00	9.53	9.00	1.19	1.00	1.01	1.00	0.40	0.61	35 75	9367
8.35	0.98	0.82	10.33	10.00	9.09	9.00	1.24	1.00	1.10	1.00	0.20	0.90	38 50	8577
10.77	0.95	0.82	9.44	9.00	8.71	8.00	0.73	1.00	1.01	1.00	1.01	------	35 00	8787
7.75	1.01	0.82	10.20	10.00	9.51	9.00	0.69	1.00	*2.46	3.00	2.46	------	41 50	9291
10.65	0.89	0.82	10.33	10.00	9.18	9.00	1.15	1.00	3.04	3.00	3.04	------	-------	8319
6.90	0.99	0.82	9.57	9.00	8.03	8.00	1.54	1.00	4.05	4.00	4.05	------	45 00	9333
6.60	1.05	0.82	9.44	9.00	8.25	8.00	1.19	1.00	2.02	2.00	0.80	1.22	39 00	9334
8.79	1.13	0.82	9.95	10.00	8.87	9.00	1.08	1.00	3.20	3.00	2.00	1.20	41 00	8099
8.47	1.49	0.82	9.44	9.00	8.36	8.00	1.08	1.00	2.00	1.00	2.00	------	40 00	9318
5.65	0.87	0.82	9.72	9.00	8.66	8.00	1.06	1.00	2.08	2.00	2.00	0.80	37 00	8100
9.45	1.73	1.65	9.76	9.00	8.83	8.00	0.93	1.00	3.95	3.00	2.60	1.35	44 25	8904
6.42	0.84	0.82	9.21	9.00	8.19	8.00	1.02	1.00	4.24	4.00	4.24	------	41 00	8554
4.82	0.63	0.41	7.72	8.00	7.13	7.00	0.59	1.00	2.03	2.00	2.03	------	35 00	8886
5.77	0.59	0.41	7.42	8.00	*6.60	7.00	0.82	1.00	2.90	2.00	2.90	------	30 50	8553
4.30	0.51	0.41	7.08	8.00	*6.49	7.00	0.59	1.00	2.77	2.00	2.77	------	32 50	9230
8.67	*1.41	1.65	8.84	9.00	8.01	8.00	0.83	1.00	6.07	5.00	2.60	3.47	53 50	8964
10.02	1.71	1.65	9.93	9.00	8.44	8.00	1.49	1.00	5.14	5.00	5.14	------	-------	8784
11.05	3.73	1.65	8.19	9.00	*7.17	8.00	1.02	1.00	*4.45	5.00	2.80	1.65	49 75	8903
12.24	1.49	1.65	12.16	11.00	9.99	10.00	2.17	1.00	6.39	6.00	6.39	------	58 00	8232
8.42	*2.83	3.29	9.90	9.00	8.01	8.00	1.89	1.00	6.24	6.00	6.24	------	68 00	8463
9.25	*3.04	3.29	10.20	9.00	8.31	8.00	1.89	1.00	6.25	6.00	6.25	------	70 00	8700
11.60	1.03	0.82	11.10	10.00	10.86	9.00	0.24	1.00	3.54	3.00	3.54	------	42 00	8741
8.97	0.90	0.82	11.73	10.00	9.22	9.00	2.51	1.00	2.88	3.00	2.88	------	41 50	8368
6.77	1.04	0.82	11.31	10.00	9.01	9.00	2.30	1.00	3.00	3.00	1.30	1.70	45 00	8703
8.17	2.81	0.41	9.89	9.00	8.93	8.00	0.96	1.00	3.68	0.50	3.68	------	34 60	9100
8.45	1.03	0.41	10.55	9.00	8.80	8.00	1.75	1.00	1.57	0.50	1.57	------	32 00	8562
5.60	0.54	0.41	10.27	9.00	8.48	8.00	1.79	1.00	0.63	0.50	0.63	------	29 00	8771
9.25	2.33	1.65	10.65	9.00	8.01	8.00	2.64	1.00	3.04	3.00	3.04	------	47 00	9205
7.00	0.50	0.41	9.12	9.00	8.00	8.00	1.12	1.00	1.42	1.00	1.42	------	30 30	8381
8.00	0.70	0.41	8.80	9.00	*7.75	8.00	1.05	1.00	1.13	1.00	1.13	------	34 00	9203
6.55	0.58	0.41	9.76	9.00	8.48	8.00	1.28	1.00	1.22	1.00	0.20	1.02	32 00	8451
7.95	0.73	0.41	10.52	9.00	8.47	8.00	2.05	1.00	2.39	2.00	2.39	------	36 00	9204
7.12	1.66	1.64	8.80	9.00	*7.29	8.00	1.51	1.00	4.99	4.00	1.20	3.79	49 50	8719
6.47	0.90	0.82	12.56	11.00	11.32	10.00	1.24	1.00	2.35	2.00	0.50	1.85	39 00	9244
7.37	1.32	0.82	11.54	11.00	10.15	10.00	1.39	1.00	2.30	2.00	0.70	1.60	42 50	9178
8.65	*2.49	3.29	11.61	9.00	9.48	8.00	2.13	1.00	*5.80	6.00	4.90	0.90	66 00	8128
9.17	*2.60	3.29	9.25	9.00	8.55	8.00	0.70	1.00	6.29	6.00	6.29	------	-------	9052
10.75	0.84	0.82	8.61	9.00	*7.77	8.00	0.84	1.00	6.58	5.00	------	6.58	49 50	8129
5.40	*1.38	1.65	9.24	9.00	8.47	8.00	0.77	1.00	2.02	2.00	2.02	------	42 00	8244
7.00	1.47	1.65	8.76	9.00	*7.61	8.00	1.15	1.00	2.02	2.00	0.70	1.32	-------	8268
6.90	0.88	0.82	8.51	9.00	*7.55	8.00	0.96	1.00	*3.64	4.00	3.64	------	50 00	9342
5.50	1.14	0.82	8.10	9.00	*7.08	8.00	1.02	1.00	4.35	4.00	4.35	------	50 00	9034
6.70	0.94	0.82	8.87	9.00	7.85	8.00	1.02	1.00	4.15	4.00	4.15	------	46 00	9125

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*Deficient.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	ROBERT A. REICHARD, ALLENTOWN, PA.	
9209	Reichard's Special Manure,	Robert A. Reichard, Allentown,
8738	Reichard's Surpass Phosphate,	Ellis Artley, Catawissa,
9206	Reichard's Surpass Phosphate,	Robert A. Reichard, Allentown,
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
9141	Royster's Bully Guano,	J. H. Cyphus, Stroudsburg,
8414	Royster's Bully Guano,	David Reigel, Jonestown,
9255	Royster's Bully Guano,	Wyalusing Hay Co., Wyalusing,
8629	Royster's Cuckoo Guano,	Carl H. H. Bauman, Scranton,
8092	Royster's Cuckoo Guano,	H. E. Mullin, Christiana,
8576	Royster's Cuckoo Guano,	J. A. Siorski, Oakdale,
8628	Royster's Dreadnought Guano,	Carl H. H. Bauman, Scranton,
8535	Royster's Dreadnought Guano,	Eulalia Milling Co., Coudersport,
8587	Royster's Dreadnought Guano,	Harvey Spencer, Cochranville,
8159	Royster's Economy Guano,	Barshinger & Craley, Red Lion,
9316	Royster's Economy Guano,	Kurtz Coal, Lumber and Supply Co., Punxsutawney.
8415	Royster's Economy Guano,	David Reigel, Jonestown,
8158	Royster's Fish and Potash,	Barshinger & Craley, Red Lion,
9361	Royster's Fish, Flesh and Fowl,	H. A. Gibner, Stoneboro,
8715	Royster's Fish, Flesh and Fowl,	Putman & Parker, Columbus,
8589	Royster's Fish, Flesh and Fowl,	Harvey Spencer, Cochranville,
8160	Royster's Penn. Potato Guano,	Barshinger & Craley, Red Lion,
8250	Royster's Penn. Potato Guano,	Glossner Implement Co., Lock Haven,
8094	Royster's Penn. Potato Guano,	H. E. Mullin, Christiana,
9142	Royster's Wonder Guano,	J. H. Cyphus, Stroudsburg,
8974	Royster's Wonder Guano,	Geo. B. MacKissick, Parkerford,
8481	Royster's Vim Guano,	S. W. Gangwere, Weatherly,
8980	Royster's Vim Guano,	Horace Hause, Uwchland,
	SCHAAL-SHELDON FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BUFFALO, N. Y.	
8868	Royal,	J. A. Adams, Mercer,
	THE SCOTT FERTILIZER COMPANY, ELKTON, MD.	
8194	Scott's Penna. Potato Grower,	Edw. W. Rupert, Oxford,
8108	Scott's Potato and Truck,	Reynolds & Kershner, Witmer,
8109	Scott's Potato Grower,	Reynolds & Kershner, Witmer,
8113	Scott's Special Grain Grower,	Reynolds & Kershner, Witmer,
8111	Scott's Standard,	Reynolds & Kershner, Witmer,
8107	Scott's Sure Crop Grower,	Reynolds & Kershner, Witmer,
8106	Scott's Sure Growth Compound,	Reynolds & Kershner, Witmer,
8979	Scott's Sure Growth Super Phosphate,	O. M. Lummis, Uwchland,
8110	Scott's Sure Growth Super Phosphate,	Reynolds & Kershner, Witmer,
8114	Scott's Wheat and Grass Grower,	Reynolds & Kershner, Witmer,
	M. L. SHOEMAKER & CO., INC., PHILADELPHIA, PA.	
9165	Swift-Sure for Oats 1-11-2,	John W. Root, Kimberton,
8608	Swift-Sure Guano for Tomatoes, Truck and Corn.	W. E. Ervin & Son, Somerton,
8594	Swift-Sure Super-Phosphate for General Use,	Wm. M. Frost & Co., Holmesburg,
8607	Swift-Sure Super Phosphate for Potatoes, No. 1.	W. E. Ervin & Son, Somerton,
8606	Swift-Sure Super Phosphate for Potatoes, No. 2.	W. E. Ervin & Son, Somerton,

FERTILIZERS—Continued.

	NITROGEN.		PHOSPHORIC ACID.						POTASH.					
			Total.		Available.		Insoluble.							
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
5.70	*2.99	3.28	7.21	7.00	5.93	6.00	1.28	1.00	2.67	2.00	0.60	2.07	51 25	9209
6.67	1.59	1.64	9.53	9.00	9.13	8.00	0.40	1.00	2.02	2.00	2.02	------	42 00	8738
7.75	2.38	1.64	8.67	9.00	*7.73	8.00	0.94	1.00	2.28	2.00	2.28	------	43 50	9206
9.37	1.49	1.65	9.31	8.50	8.38	8.00	0.93	0.50	5.47	5.00	5.47	------	50 00	9141
8.67	*1.44	1.65	9.35	8.50	8.58	8.00	0.77	0.50	4.82	5.00	4.82	------	49 75	8414
10.15	1.51	1.65	9.18	8.50	8.52	8.00	0.66	0.50	*4.17	5.00	4.17	------	51 00	9256
3.85	0.73	0.82	7.97	8.50	*7.29	8.00	0.68	0.50	1.00	1.00	------	1.00	46 00	8629
7.45	0.94	0.82	9.15	8.50	8.00	8.00	1.15	0.50	1.04	1.00	1.04	------	34 00	8092
7.90	1.04	0.82	8.55	8.50	*7.08	8.00	1.47	0.50	1.12	1.00	1.12	------	37 00	8576
9.90	1.83	1.65	8.36	8.50	*7.57	8.00	0.79	0.50	2.08	2.00	2.08	------	45 00	8628
7.32	1.70	1.65	9.18	8.50	8.01	8.00	1.17	0.50	1.81	2.00	1.81	------	45 00	8535
9.32	1.58	1.65	8.88	8.50	7.89	8.00	0.99	0.50	2.22	2.00	2.22	------	42 00	8587
3.52	0.85	0.82	8.95	8.50	8.06	8.00	0.89	0.50	2.22	2.00	1.60	0.62	39 00	8159
9.37	1.10	0.82	8.67	8.50	7.88	8.00	0.79	0.50	1.92	2.00	1.92	------	34 59	9316
6.50	0.88	0.82	8.58	8.50	*7.67	8.00	0.91	0.50	2.04	2.00	2.04	------	36 50	8415
7.77	1.82	1.65	10.32	8.50	9.06	8.00	1.26	0.50	1.80	1.00	------	1.80	42 00	8158
9.12	1.65	1.65	10.08	8.50	9.16	8.00	0.92	0.50	*2.66	3.00	2.66	------	50 50	9361
10.57	1.58	1.65	8.67	8.50	8.12	8.00	0.55	0.50	3.31	3.00	3.31	------	50 00	8715
7.80	1.73	1.65	9.50	8.50	8.01	8.00	1.49	0.50	2.98	3.00	2.98	------	45 00	8589
6.65	1.50	1.65	6.45	6.50	5.88	6.00	0.57	0.50	*2.76	3.00	2.76	------	46 00	8160
5.25	*1.40	1.65	7.27	6.50	6.10	6.00	1.17	0.50	3.06	3.00	------	3.06	50 00	8250
5.50	1.69	1.65	7.36	6.50	6.19	6.00	1.17	0.50	2.94	3.00	2.94	------	46 00	8094
7.42	0.87	0.82	9.06	8.50	8.10	8.00	0.96	0.50	3.26	3.00	3.26	------	40 00	9142
8.65	1.03	0.82	8.99	8.50	8.00	8.00	0.99	0.50	*2.80	3.00	1.60	1.20	45 00	8974
12.60	1.46	1.65	12.88	12.50	*11.35	12.00	1.53	0.50	1.92	2.00	1.92	------	43 00	8481
9.50	2.90	1.65	8.93	12.50	*7.21	12.00	1.72	0.50	1.88	2.00	1.40	0.48	43 00	8980
3.42	0.88	0.82	8.55	8.00	6.93	7.00	1.62	1.00	1.11	1.00	0.30	0.81	34 50	8868
6.50	0.93	0.82	8.42	9.00	*7.62	8.00	0.80	1.00	2.08	2.00	2.08	------	39 00	8194
6.32	2.52	2.47	10.40	10.00	9.16	9.00	1.24	1.00	2.22	2.00	1.50	0.72	50 00	8108
6.30	1.75	1.65	11.16	11.00	9.83	10.00	1.33	1.00	4.34	4.00	1.70	2.64	51 00	8109
7.35	0.88	0.82	8.75	9.00	8.02	8.00	0.73	1.00	1.12	1.00	0.70	0.42	35 00	8113
7.65	1.43	0.82	10.08	10.00	8.83	9.00	1.25	1.00	2.72	2.00	1.80	0.92	41 50	8111
7.05	*2.08	2.47	8.74	9.00	8.10	8.00	0.64	1.00	3.48	3.00	1.90	1.58	52 00	8107
7.35	3.15	3.30	9.53	9.00	8.24	8.00	1.29	1.00	4.34	4.00	1.80	2.54	61 00	8106
7.12	1.58	1.65	9.50	9.00	8.95	8.00	0.55	1.00	*1.77	2.00	1.77	------	43 50	8979
7.25	1.49	1.65	9.34	9.00	8.59	8.00	0.75	1.00	2.54	2.00	1.80	0.74	43 00	8110
6.10	0.56	0.41	8.84	9.00	8.04	8.00	0.80	1.00	2.46	2.00	2.46	------	35 00	8114
11.50	1.13	0.82	14.92	13.00	13.85	11.00	1.07	2.00	*1.74	2.00	1.74	------	-------	9165
10.17	1.78	1.65	14.61	12.00	11.23	10.00	3.38	2.00	*1.74	2.00	0.60	1.14	49 00	8608
7.92	2.83	2.46	11.80	11.00	9.04	8.00	2.76	3.00	3.26	3.00	3.26	------	58 00	8594
8.70	*3.05	3.30	11.14	11.00	9.53	8.00	1.61	3.00	5.68	5.00	5.68	------	70 00	8607
9.55	1.57	1.65	10.91	11.00	8.65	8.00	2.26	3.00	4.84	4.00	4.84	------	54 00	8606

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*Deficient.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
9225	Swift-Sure Super Phosphate for Potatoes, No. 2.	M. O. Johnson, Hellertown,
9028	Swift-Sure Super Phosphate for Potatoes, No. 2.	L. A. Steigerwalt, Andreas,
9164	Swift-Sure Super Phosphate for Sweet Potatoes.	John W. Root, Kimberton,
	THE SMITH AGRICULTURAL CHEMICAL COMPANY, COLUMBUS, OHIO.	
8835	Smith's Ammoniated Phosphate and Potash,	Geo. J. Abbey, West Springfield,
	THE SOUTHERN FERTILIZING CO., BALTIMORE, MD.	
8661	Special Potato Grower,	S. M. Grim, Paxatannia,
8663	Wheat, Corn and Grass Grower,	S. M. Grim, Paxatannia,
	SWIFT & COMPANY, BALTIMORE, MD.	
8353	Standard Potato Fertilizer,	J. C. Walker & Sons Co., Gap,
9253	Swift's Champion Wheat and Corn Grower,	A. E. Woodruff & Son, Wysox,
9260	Swift's Champion Wheat and Corn Grower,	Wyalusing Hay Co., Wyalusing,
8532	Swift's Diamond B Fertilizer,	Owlett & White, Galeton,
9348	Swift's Diamond C Fertilizer,	R. G. Young's Sons, New Galilee,
8286	Swift's Early Truck Grower,	J. M. Lucas, Valley View,
8538	Swift's Harrison Formula for Cobblers,	Eulalia Milling Co., Coudersport,
8284	Swift's Harrison Formula for Cobblers,	M. S. Schwaml, Hegins,
8668	Swift's Hummer,	E. B. Fritz Sons Co., Quarryville,
9378	Swift's New York Corn Special,	C. M. Amon, Transfer,
9152	Swift's New York Corn Special,	Adam Schmehl, North Wales,
8671	Swift's Red Steer,	E. B. Fritz Sons Co., Quarryville,
9196	Swift's Red Steer,	Wm. F. Guth, Macungie,
8403	Swift's Reliable Grain Fertilizer,	P. J. Oesterling & Son, Butler,
9274	Swift's Reliable Grain Fertilizer,	Burton Williams, Mehoopany,
8464	Swift's Special Corn and Wheat Grower,	M. Getty, Orangeville,
9350	Swift's Super Phosphate,	R. G. Young's Sons, New Gallilee,
9380	Swift's Truck Grower,	C. M. Amon, Transfer,
8465	Swift's Truck Grower,	M. Getty, Orangeville,
9275	Swift's Truck Grower,	Burton Williams Mehoopany,
	I. P. THOMAS & SON COMPANY, PHILADELPHIA, PA.	
9212	Farmers Choice 2-12-2,	T. O. Bachman, Hellertown,
8926	Farmers Choice 2-12-2,	Rohrer Brothers, Ronks,
8665	Farmers Choice 2-12-2,	B. M. Stoltzfus, Elverson,
9385	Improved Fertilizer,	Rohrer Brothers, Ronks,
9213	Tip Top Super Phosphate 3-8-4,	T. O. Bachman, Hellertown,
8895	Tip Top Super Phosphate 3-8-4,	D. L. Hertzler, Mechanicsburg,
9214	Trucker's High Grade Guano 4-8-4,	T. O. Bachman, Hellertown,
8264	Trucker's High Grade Guano 4-8-4,	J. K. Maurer, Pitman,
9386	Victor Potash Fertilizer 2-8-5,	Rohrer Brothers, Ronks,
	F. W. TUNNELL & COMPANY, INC., PHILADELPHIA, PA.	
8145	Wheat and Cereal Manure,	Lorenza Laudermilck, Lebanon,
	THE J. E. TYGERT COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.	
8973	Golden Harvest Phosphate,	Wm. H. Lenhart, Phoenixville,
8336	Neptune Fish Compound,	Cook Grain, Feed & Supply Co., Dillsburg,
9161	Neptune Fish Compound,	W. M. Keyser, Oaks,
9293	Popular Phosphate,	Wolf & Huffman, Watsontown,
8598	Potato Fertilizer,	Mullin Brothers, Bustleton,
8596	Special Potato and Tomato Guano,	Mullin Brothers, Bustleton,

FERTILIZERS—Continued.

	NITROGEN.		PHOSPHORIC ACID.						POTASH.					
			Total.		Available.		Insoluble.							
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
7.27	2.03	1.65	10.91	11.00	8.32	8.00	2.59	3.00	4.72	4.00	4.72	------	54 00	9225
7.32	2.17	1.65	10.84	11.00	8.00	8.00	2.84	3.00	4.52	4.00	4.52	------	40 00	9028
5.57	1.48	0.82	10.14	11.00	8.16	8.00	1.98	3.00	5.24	5.00	5.24	------	53 00	9164
4.92	0.80	0.82	8.66	------	8.09	8.00	0.57	------	1.00	1.00	1.00	------	30 00	8835
8.72	0.91	0.82	9.62	9.00	8.23	8.00	1.39	1.00	4.25	4.00	4.25	------	43 00	8661
8.85	1.46	1.65	9.06	9.00	8.23	8.00	0.83	1.00	2.35	2.00	2.35	------	43 00	8663
5.70	1.68	1.65	8.60	8.00	8.32	8.00	0.28	------	*2.74	3.00	2.74	------	48 00	8353
7.00	1.78	1.65	13.20	12.00	12.06	12.00	1.14	------	2.21	2.00	0.70	1.51	------	9253
6.42	1.74	1.65	13.14	12.00	12.06	12.00	1.08	------	2.04	2.00	0.60	1.44	------	9260
6.35	2.29	2.47	8.83	8.00	8.38	8.00	0.45	------	*4.50	5.00	4.50	------	61 00	8532
11.12	1.50	1.65	10.82	8.00	8.74	8.00	2.08	------	7.15	5.00	1.70	5.45	55 00	9348
5.10	3.15	3.29	8.23	8.00	8.01	8.00	0.22	------	*4.77	5.00	4.77	------	------	8286
7.72	3.10	3.29	9.93	10.00	*9.47	10.00	0.46	------	2.56	2.00	1.20	1.36	57 00	8538
11.15	*3.01	3.29	10.56	10.00	10.09	10.00	0.47	------	*1.76	2.00	1.76	------	60 00	8284
7.87	4.00	4.11	8.64	8.00	*7.68	8.00	0.96	------	6.42	5.00	6.42	------	69 00	8668
13.25	1.74	1.65	11.16	11.00	9.86	10.00	1.30	1.00	2.01	2.00	2.01	------	46 00	9378
7.52	1.80	1.65	11.54	10.00	*9.78	10.00	1.76	------	2.45	2.00	2.45	------	------	9152
6.42	1.71	1.65	9.69	8.00	8.89	8.00	0.80	------	2.18	2.00	2.18	------	42 50	8671
6.80	1.88	1.65	7.97	8.00	*7.34	8.00	0.63	------	2.03	2.00	2.03	------	44 35	9196
5.70	0.73	0.82	9.78	8.50	8.47	8.00	1.31	0.50	*0.80	1.00	0.20	0.60	38 00	8403
3.20	1.13	0.82	8.10	8.00	*7.77	8.00	0.33	------	1.00	1.00	1.00	------	34 50	9274
5.00	1.80	1.65	11.12	10.00	10.23	10.00	0.89	------	*2.98	4.00	2.98	------	50 00	8464
6.35	1.85	1.65	9.44	8.00	7.85	8.00	1.59	------	2.00	2.00	0.60	1.40	46 00	9350
9.97	1.04	0.82	10.97	9.00	9.41	9.00	1.56	------	4.03	4.00	4.03	------	44 50	9380
5.22	0.94	0.82	9.93	9.00	9.76	9.00	0.17	------	*3.58	4.00	3.58	------	43 00	8465
4.65	1.37	0.82	8.80	9.00	*8.51	9.00	0.29	------	3.84	4.00	3.84	------	43 80	9275
13.80	1.91	1.65	12.69	12.50	11.87	12.00	0.82	0.50	2.34	2.00	2.34	------	48 00	9212
11.62	1.64	1.65	11.74	12.50	*10.94	12.00	0.80	0.50	2.04	2.00	2.04	------	49 00	8926
8.00	1.50	1.65	12.74	12.50	12.01	12.00	0.73	0.50	*1.76	2.00	1.76	------	------	8665
10.62	1.11	0.82	11.86	10.50	11.06	10.00	0.80	0.50	1.55	1.00	1.55	------	38 00	9385
9.30	2.45	2.45	9.25	8.50	7.91	8.00	1.34	0.50	4.27	4.00	4.27	------	56 00	9213
8.27	*2.27	2.45	9.46	8.50	7.98	8.00	1.48	0.50	4.37	4.00	4.37	------	53 25	8895
11.45	*2.90	3.25	8.99	8.50	8.00	8.00	0.99	0.50	4.28	4.00	4.28	------	65 00	9214
11.32	3.14	3.25	8.13	8.50	*7.22	8.00	0.91	0.50	4.20	4.00	4.20	------	55 00	8264
8.35	1.71	1.62	9.63	8.50	8.52	8.00	1.11	0.50	*4.36	5.00	4.36	------	54 00	9386
9.92	1.10	0.82	8.97	9.00	7.83	8.00	1.14	1.00	4.32	4.00	4.32	------	------	8145
6.85	1.23	0.82	8.93	9.00	8.34	8.00	0.59	1.00	2.23	2.00	------	2.23	37 00	8973
9.20	0.89	0.82	10.29	10.00	9.09	9.00	1.20	1.00	3.08	3.00	3.08	------	42 00	8336
4.90	1.23	0.82	10.01	10.00	9.04	9.00	0.97	1.00	3.22	3.00	2.50	0.72	44 50	9161
5.22	1.00	0.82	8.36	8.00	7.11	7.00	1.25	1.00	1.09	1.00	0.40	0.69	37 50	9293
11.97	3.51	3.29	9.21	9.00	8.66	8.00	0.55	1.00	3.93	4.00	3.93	------	64 25	8598
10.92	2.34	2.47	9.10	9.00	8.33	8.00	0.77	1.00	4.08	4.00	4.08	------	58 25	8596

*Deficient.

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	UNION CHEMICAL WORKS, INC., NORTH WALES, PA.	
8997	Farmers Favorite,	J. Dyre Moyer, Willow Grove,
9155	Farmers Special,	Chas. Wegscheider, Line Lexington,
8998	Ideal Potato Manure,	J. Dyre Moyer, Willow Grove,
	VIRGINIA-CAROLINA CHEMICAL COMPANY OF DELAWARE, NEW YORK N. Y.	
8694	V. C. Challenge Brand,	John S. Zimmerman, Terre Hill,
8484	V. C. Double Owl Brand.	Victor Solt, Lehighton,
8134	V. C. Owl Brand,	N. R. Yost, Myerstown,
8899	V. C. Owl Brand,	John S. Zimmerman, Terre Hill,
8584	V. C. Plant Food for Vegetables, Lawns and Flowers.	A. J. Steele, Latrobe,
8133	V. C. Plow Brand,	N. R. Yost, Myerstown,
8695	V. C. Standard Grain Grower,	John S. Zimmerman, Terre Hill,
	J. & R. WALTER, HANOVER, PA.	
9022	Walter's Crop Producer,	J. & R. Walter, Hanover,
	WASHINGTON, ALEXANDER & COOKE CO., CHARLESTOWN, W. VA.	
8570	Wacco Potato and Tobacco Manure,	E. S. Kelley, Gettysburg,
8915	Wacco Potato and Tobacco Manure,	Quarryville Farmers Association, Quarryville.
8918	Wacco Regular Potato and Tobacco Grower,	Quarryville Farmers Association, Quarryville.
8916	Wacco Valley Crop Producer,	Quarryville Farmers Association, Quarryville.
8571	Wacco Wheat, Corn and Oats Mixture,	E. S. Kelley, Gettysburg,
9105	Wacco Wheat, Corn and Oats Mixture,	Ed. Nipple, Walnut,
	WILKES-BARRE FERTILIZER COMPANY, WILKES-BARRE, PA.	
9044	Seybold's Special,	Bruce Henrie, Nescopeck,
	THE ROBERT A. WOOLDRIDGE COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
8417	Wooldridge's Chieftain Phosphate,	Adam S. Steily, Sinking Spring,
8762	Wooldridge's Farmer's Favorite Cereal Compound Revised.	A. C. Dubbs, Brillharts,
8376	Wooldridge's Triumph Brand Phosphate, Revised.	Chas. C. Catherman, Hartleton,
	YORK CHEMICAL WORKS, YORK, PA.	
8679	Dempwolf's Grain Special,	H. M. Stouffer & Son, Leola,
8206	Dempwolf's Grain Special,	Thomas, Haines Co., Malvern,
8683	Dempwolf's One Eight One,	H. M. Stouffer & Son, Leola,
9194	Dempwolf's One Eight and Two,	Geo. J. Edelman, Northampton,
9384	Dempwolf's' Plow Brand,	H. H. Buxton, Grove City,
8567	Dempwolf's Plow Brand.	Geo. H. Duttera, Guldens,
9193	Dempwolf's Plow Brand,	Geo. J. Edelman, Northampton,
8490	Dempwolf's Potato and Truck,	E. A. Beck, Lehighton,
9090	Dempwolf's Potato and Truck,	W. H. Kramer, McCallistersville,
8539	Dempwolf's Potao and Truck,	Jake Swanson, Coudersport,
8681	Dempwolf's R. B. Special,	H. M. Stouffer & Son, Leola,

FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
9.70	1.53	1.64	6.19	6.00	6.00	6.00	0.19	-------	2.00	2.00	0.70	1.30	49 00	8997
7.02	0.99	0.82	8.74	8.00	8.34	8.00	0.40	-------	*0.78	1.00	0.78	------	35 00	9155
8.65	*2.74	3.28	9.25	8.00	9.06	8.00	0.19	-------	*3.40	4.00	1.40	2.00	69 00	8998
11.40	0.89	0.82	11.67	10.00	9.25	9.00	2.42	1.00	3.05	3.00	3.05	------	38 75	8694
6.95	3.20	3.29	10.59	9.00	8.00	8.00	2.59	1.00	6.06	6.00	6.06	------	63 30	8484
8.22	1.88	1.65	10.14	9.00	8.04	8.00	2.10	1.00	5.62	3.00	5.62	------	51 50	8134
9.17	1.81	1.65	10.08	9.00	8.33	8.00	2.55	1.00	*2.77	3.00	2.77	------	43.50	8899
6.70	5.40	4.94	10.84	9.00	8.35	8.00	2.49	1.00	2.14	2.00	------	2.14	per lb. †25c	8584
8.17	1.03	0.82	10.08	9.00	8.57	8.00	1.51	1.00	1.31	1.00	0.70	0.61	34 75	8133
7.00	0.90	0.82	9.59	9.00	8.06	8.00	1.53	1.00	2.17	2.00	2.17	------	35 50	8695
†4.12	†0.15	0.17	†0.38	0.42	†0.27	-------	†0.11	-------	†0.16	0.12	0.16	------	†14 00	9022
6.90	0.45	0.41	9.38	8.00	7.20	7.00	2.18	1.00	2.00	2.00	2.00	------	32 00	8570
3.85	0.59	0.41	6.63	8.00	*6.39	7.00	0.24	1.00	2.40	2.00	2.40	------	34 50	8915
7.12	0.91	0.82	8.51	9.00	8.00	8.00	0.51	1.00	4.36	3.00	4.36	------	41 60	8918
6.95	1.75	1.65	9.82	9.00	8.93	8.00	0.89	1.00	2.88	2.00	2.88	------	44 35	8916
4.80	0.75	0.41	10.27	9.00	8.61	8.00	1.66	1.00	1.14	1.00	1.14	------	30 50	8571
5.37	0.72	0.41	10.65	9.00	8.80	8.00	1.85	1.00	1.06	1.00	1.06	------	31 50	9105
14.70	2.64	2.00	11.10	11.00	10.04	10.00	1.06	1.00	3.43	2.00	2.70	0.73	-------	9044
7.50	1.85	1.65	8.97	9.00	8.41	8.00	0.56	1.00	2.10	2.00	0.80	1.30	-------	8417
6.75	0.92	0.82	9.18	8.00	7.62	7.00	1.56	1.00	1.08	1.00	------	1.08	34 00	8762
7.92	1.67	1.65	9.28	9.00	*7.19	8.00	2.09	1.00	3.00	3.00	1.20	1.80	47 75	8376
10.27	1.68	1.64	13.05	12.00	12.22	12.00	0.83	-------	2.32	2.00	1.00	1.32	48 00	8679
12.20	1.71	1.64	12.50	12.00	*11.73	12.00	0.77	-------	2.16	2.00	1.30	0.86	49 00	8206
9.77	0.88	0.82	9.06	8.00	8.32	8.00	0.74	-------	1.43	1.00	1.43	------	36 00	8683
8.07	0.67	0.82	9.89	8.00	9.24	8.00	0.65	-------	2.60	2.00	2.60	------	35 55	9194
5.35	1.45	1.64	9.06	8.00	8.58	8.00	0.48	-------	1.86	2.00	1.00	0.86	40 00	9384
9.60	1.70	1.64	8.97	8.00	8.37	8.00	0.69	-------	2.04	2.00	2.04	------	38 47	8567
9.32	1.90	1.64	8.80	8.00	8.23	8.00	0.57	-------	2.41	2.00	2.41	------	41 00	9193
10.45	*3.46	4.10	9.06	8.00	8.32	8.00	0.74	-------	7.20	7.00	6.10	1.10	75 00	8490
9.70	*3.83	4.10	9.76	8.00	8.93	8.00	0.83	-------	7.85	7.00	4.30	3.55	72 00	9090
12.47	*3.70	4.10	9.13	8.00	8.31	8.00	0.82	-------	6.84	7.00	6.84	------	72 70	8539
8.74	1.73	1.64	14.35	12.00	10.38	10.00	3.97	2.00	4.33	4.00	0.90	3.43	58 00	8681

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*Deficient.
†Excluded from average.

TABLE I.—COMPLETE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
8556	Dempwolf' Sspring Special,	Loganville Farmers Cooperative Association, Loganville.
8491	Dempwolf's Standard,	E. A. Beck, Lehighton,
8205	Dempwolf's Standard,	Thomas, Haines Co., Malvern,
8568	Dempwolf's Standard Potash,	Geo. H. Duttera, Guldens,
8678	Dempwolf's Standard Potash,	H. M. Stouffer & Son, Leola,
8830	Dempwolf's Standard Potash,	Union Cooperative Association, Union City,
9391	Dempwolf's Tobacco Special,	J. Harry Summy, Landesville,
		Average,

FERTILIZERS—Concluded.

	NITROGEN.		PHOSPHORIC ACID.						POTASH.					
			Total.		Available.		Insoluble.							
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	%	%	$	
10.60	3.25	3.28	11.23	10.00	10.03	10.00	1.20	-------	4.42	4.00	3.90	0.52	56 80	8556
8.15	1.64	1.64	9.63	8.00	8.48	8.00	1.15	-------	5.18	5.00	5.18	------	53 00	8491
9.40	1.57	1.64	9.16	8.00	8.27	8.00	0.89	-------	4.98	5.00	4.98	------	54 00	8205
8.87	*0.61	0.82	9.12	8.00	8.34	8.00	0.78	-------	4.52	4.00	4.52	------	38 47	8568
7.67	0.89	0.82	10.01	8.00	9.03	8.00	0.98	-------	*3.38	4.00	0.55	2.83	44 00	8678
8.85	1.11	0.82	8.83	8.00	8.03	8.00	0.80	-------	4.21	4.00	4.21	------	43 50	8830
8.27	4.68	4.10	9.89	5.00	5.83	5.00	4.06	-------	5.33	5.00	1.00	4.33	85 00	9291
8.10	1.51	------	9.59	-------	8.42	-------	1.17	-------	2.83	------	------	------	$44 15	-----

*Deficient.

TABLE NO. II—NITROGEN AND

Including Dissolved Bones

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE ALLENTOWN MANUFACTURING CO., ALLENTOWN, PA.	
8954	Ameo Phosphate,	M. D. Kunkel, Stony Run,
8953	Quick Return Phosphate,	M. D. Kunkel, Stony Run,
8951	Reliable Phosphate,	M. D. Kunkel, Stony Run,
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
8579	Ammoniated Fertilizer A,	D. A. Hankey, Parnassus,
9170	Ammoniated Superphosphate,	J. M. Hiltebeitel, Green Lane,
9133	Bradley's Economy Fertilizer,	J. D. Box, Gravity,
8261	Bradley's Economy Fertilizer,	Charles McDowell, Mansfield,
9132	Bradley's Golden Crop Compound,	J. D. Box, Gravity,
9134	Bradley's Special Superior Compound,	W. H. Swartz, Moseow,
8961	Josiah Cope's Excelsior No. 1,	Joseph H. Kettering, Palmyra,
8750	Josiah Cope's Excelsior No. 1,	J. A. Spangler, Fairfield,
8101	Josiah Cope's Fish Phosphate,	Jones Eavenson, Christiana,
8696	Crocker's Farmers Choice,	M. H. Kelly, Smethport,
8717	Crocker's Farmers Choice,	Smith, Metzgar, Wright & Co., Sheffield,
8552	W. S. Farmer's All Crop Mixture No. 2,	Manifold & Wallace, High Rock,
8839	Milsom's Golden Eagle,	E. J. Eagley, West Springfield,
8844	Milsom's Golden Eagle,	Sweeny & Stevens, Conneautville,
8936	Milsom's Special Phosphate,	Sharon Mills, Shinglehouse,
8845	Milsom's Special Phosphate,	Sweeny & Stevens, Conneautville,
9189	Nassau Old Hickory Revised,	Ira Burgstresser, Ottsville,
8891	Nassau Old Hickory Revised,	Duncannon Flouring Mill Co., Duncannon,
8222	Perkins Globe Phosphate,	Jerome H. Tingley, Coatesville,
9060	Read's Practical Grain Grower,	Salem Smith, Orwigsburg,
8341	Susquehanna Winner Phosphate,	J. C. Brubaker, Lititz,
8437	Susquehanna Winner Phosphate,	Franklin S. Merkel, Fleetwood,
9323	Wheeler's Ammoniated Corn Phosphate,	A. S. Kelly, Ebensburg,
9298	Wheeler's Banner Wheat Grower,	W. N. Brosha, Antes Fort,
8436	Wheeler's Banner Wheat Grower,	Geo. H. Freyberger, Oley,
9381	Wheeler's Banner Wheat Grower,	J. M. McConnell, Volant,
8966	Wheeler's Success Fertilizer,	Wm. J. Johnson, Sinking Springs,
8723	Williams & Clark's Sterling Mixture,	McHenry & Masteller, Bloomsburg,
8698	Wizard Phosphate,	M. H. Kelly, Smethport,
	THE AMERICAN AGRICULTURAL CHEMICAL CO., THE POLLOCK FERTILIZER CO. BRANCH, BALTIMORE, MD.	
8780	Pollock's Our Brand Guano,	H. O. Andrews, Mapleton Depot,
8290	Pollock's Our Brand Guano,	Blackburn Milling Co., Cessna,
8818	Pollock's Our Brand Guano,	P. A. Herman, Selinsgrove,
	AMERICAN FERTILIZING COMPANY, BALTIMORE, MD.	
8913	American Champion Ammoniated Phosphate,	Quarryville Farmers Association, Quarryville.
8875	American Fish and Bone Special,	Oil City Woodworking Co., Oil City,
8921	American Special Fish Guano,	Quarryville Farmers Association, Quarryville.
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.	
9237	Armour's 1-10-0 Fertilizer,	Nazareth Coal & Lumber Co., Nazareth,
8496	Cereal Special No. 4,	H. F. Gelbach, Evans City,
9351	Cereal Special No. 4,	D. J. Overlander, Racine,
8602	Grain Special,	Elmer Danenberger, Huntingdon Valley,
8486	Grain Special,	H. A. Smith, Lehighton,
8514	Grain Special,	Smith & Logan, Cabot,
8604	Potato Grower,	W. E. Ervin & Son, Somerton,
8489	Potato Grower,	H. A. Smith, Lehighton,

PHOSPHORIC ACID FERTILIZERS.

and Other Like Products.

	NITROGEN.		PHOSPHORIC ACID.							
			Total.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	$	
12.50	1.85	1.65	13.59	10.00	7.34	5.00	6.25	5.00	40 00	8954
7.07	1.17	1.03	12.31	10.00	7.91	6.00	4.40	4.00	35 00	8953
8.52	2.60	2.47	10.97	10.00	7.08	5.00	3.89	5.00	45 00	8951
6.65	1.03	0.82	11.66	11.00	10.58	10.00	1.08	1.00	37 00	8579
2.52	1.23	0.82	10.14	9.00	8.42	8.00	1.72	1.00	35 00	9170
5.35	1.15	0.82	13.39	11.00	11.00	10.00	2.39	1.00	33 00	9133
6.60	0.90	0.82	12.43	11.00	9.93	10.00	2.50	1.00	36 00	8261
9.00	2.43	2.47	12.44	11.00	11.08	10.00	1.36	1.00	44 00	9132
6.57	2.00	1.65	11.74	11.00	10.60	10.00	1.14	1.00	46 00	9134
6.92	1.18	0.82	12.05	11.00	10.97	10.00	1.08	1.00	34 00	8961
8.65	0.92	0.82	11.19	11.00	10.00	10.00	1.19	1.00	--------	8750
5.45	0.89	0.82	9.15	9.00	*7.19	8.00	1.96	1.00	35 00	8101
4.57	1.00	0.82	11.74	11.00	9.83	10.00	1.91	1.00	38 50	8696
3.85	0.88	0.82	11.99	11.00	10.18	10.00	1.81	1.00	45 00	8717
7.05	1.89	1.65	11.23	11.00	10.72	10.00	0.51	1.00	35 80	8552
2.00	1.73	1.65	12.62	11.00	10.34	10.00	2.28	1.00	39 75	8839
4.22	1.96	1.65	12.07	11.00	10.68	10.00	1.39	1.00	40 50	8844
4.30	0.96	0.82	12.21	11.00	10.11	10.00	2.10	1.00	36 00	8936
5.40	1.24	0.82	12.50	11.00	10.74	10.00	1.76	1.00	35 00	8845
5.57	1.37	0.82	11.10	11.00	*9.80	10.00	1.30	1.00	35 50	9189
3.25	1.04	0.82	12.18	11.00	10.98	10.00	1.20	1.00	33 50	8891
4.00	1.05	0.82	8.86	9.00	*6.65	8.00	2.21	1.00	--------	8222
11.47	2.19	1.65	11.03	11.00	*9.37	10.00	1.66	1.00	--------	9060
5.37	1.79	1.65	11.74	11.00	*8.86	10.00	2.88	1.00	37 50	8341
6.25	2.17	1.65	10.97	11.00	10.33	10.00	0.64	1.00	--------	8437
6.50	1.79	1.65	11.74	11.00	10.04	10.00	1.70	1.00	42 00	9323
7.95	0.87	0.82	11.35	11.00	10.24	10.00	1.11	1.00	34 50	9298
6.80	0.90	0.82	10.97	11.00	*9.66	10.00	1.31	1.00	--------	8436
2.65	0.95	0.82	12.25	11.00	10.25	10.00	2.00	1.00	34 00	9381
7.75	2.42	2.47	11.80	11.00	10.07	10.00	1.73	1.00	46 00	8066
5.10	2.30	1.65	12.18	11.00	10.67	10.00	1.51	1.00	41 00	8723
1.50	0.58	0.41	10.08	9.00	8.17	8.00	1.91	1.00	33 50	8698
5.32	0.85	0.82	9.57	9.00	*7.04	8.00	2.53	1.00	--------	8780
3.20	0.89	0.82	9.21	9.00	*7.36	8.00	1.85	1.00	32 50	8290
3.25	0.98	0.82	9.07	9.00	8.09	8.00	0.98	1.00	32 25	8818
5.12	*1.44	1.65	13.46	11.00	10.55	10.00	2.91	1.00	38 10	8013
7.25	1.75	1.65	14.67	12.00	11.43	11.00	3.24	1.00	56 00	8875
5.55	1.14	0.82	12.95	11.00	11.11	10.00	1.84	1.00	38 85	8921
3.87	0.98	0.82	11.03	10.50	10.01	10.00	1.02	0.50	33 15	9237
10.00	1.84	1.65	14.09	12.50	12.69	12.00	1.40	0.50	44 00	8496
10.65	1.90	1.65	14.09	12.50	12.75	12.00	1.34	0.50	44 00	9351
10.25	1.72	1.65	11.25	10.50	10.05	10.00	1.20	0.50	40 00	8602
11.57	1.73	1.65	11.57	10.50	10.74	10.00	0.83	0.50	40 00	8486
6.70	1.85	1.65	11.61	10.50	10.08	10.00	1.53	0.50	40 00	8514
5.05	3.52	3.29	10.46	10.50	*9.27	10.00	1.19	0.50	54 00	8604
10.17	3.18	3.29	11.80	10.50	10.72	10.00	1.08	0.50	--------	8489

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.	
8154	Old Honesty,	J. S. Knisely, Red Lion,
	BAUGH & SONS COMPANY, PHILADELPHIA, PA.	
9327	Baugh's Corn and Oats Fertilizer,	Edwards Hardware Co., Ebensburg,
9219	Baugh's Corn and Oats Fertilizer,	John J. Peter, Breinigsville,
8200	Baugh's Corn and Oats Fertilizer,	Thomas, Haines Co., Malvern,
9118	Baugh's Half and Half Mixture,	Homer Decker, Bellefonte,
8201	Baugh's High Grade Ammoniated Animal Base.	Thomas, Haines Co., Malvern,
8361	Baugh's Peninsula Grain Producer,	E. B. Fritz & Sons Co., Quarryville,
8399	Baugh's Peninsula Grain Producer,	P. J. Oesterling & Son, Butler,
9120	Baugh's Peninsula Grain Producer,	F. R. Varcol, Waymarth,
9220	Baugh's The Old Stand-By Dissolved Animal Base.	Lehigh Exchange, Germansville,
9387	Baugh's The Old Stand-By Dissolved Animal Base.	H. R. Lutz, Denver,
8202	Baugh's The Old Stand-By Dissolved Animal Base.	Thomas, Haines Co., Malvern,
8355	Baugh's Truckers Favorite,	J. H. Brinton, Gap,
8392	Baugh's Trucker's Favorite,	Thomas K. George, Homer City,
	TRE BERG COMPANY, PHILADELPHIA, PA.	
8943	Berg's Animal Bone and Meat,	Anthony & Company, Renovo,
8613	Berg's Animal Bone and Meat,	W. H. Walker & Co., Kennett Square,
8211	Berg's Special Animal Manure,	Edward F. Bracken, Paoli,
8212	Berg's Special Crop Grower,	Edward F. Bracken, Paoli,
	BERGER BROTHERS, EASTON, PA.	
9247	Peerless Phosphate Revised,	Berger Brothers, Easton,
	BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
8851	Bowker's Superphosphate with Ammonia 1%,	Marshall Brothers, New Castle,
8710	Bowker's Superphosphate with Ammonia 1%,	Mitchell Hardware Co., Mt. Jewett,
9076	Bowker's Superphosphate with Ammonia 2%,	George Chichura, Olyphant,
8942	Bowker's Superphosphate with Ammonia 2%,	Emporium Supply Co., Emporium,
8709	Bowker's Superphosphate with Ammonia 2%.	Mitchell Hardware Co., Mt. Jewett,
	THE CENTRAL CHEMICAL COMPANY, HAGERSTOWN, MD.	
9340	Acme Brand,	M. R. Brumbaugh, Martinsburg,
8262	Acme Brand,	Charles Davis, Middlebury,
9228	Dissolved Bone Compound,	Oliver DeLong, Slatington,
8302	Fish Compound,	Francis Baker, Everett,
8174	Fish Compound,	J. S. Phillips, Littlestown,
8529	Fish Compound,	J. L. Sagers, Westfield,
8523	Planters Compound,	J. T. King, Lawrenceville,
9347	Planters Compound,	Wm. A. Nickles, Shippensburg,
8883	Pride of the Valley,	Acme Milling Co., Cochranton,
8303	Pride of the Valley,	Francis Baker, Everett,
8526	Pride of the Valley,	C. S. Chamberlin, Sabinsville,
8524	Superior,	C. S. Chamberlin, Sabinsville,
9097	Superior,	Jacob Zook, Belleville,
8480	Truck Special,	James Adams, Weatherly,
8940	Truck Special,	F. J. Davis & Co., Shinglehouse,

PHORIC ACID FERTILIZERS—Continued.

	NITROGEN.		PHOSPHORIC ACID.							
			Total.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	$	
3.35	1.18	0.82	8.70	9.00	7.96	8.00	0.74	1.00	32 55	8154
10.00	2.04	1.65	10.46	10.00	9.91	10.00	0.55	--------	42 50	9327
4.97	2.07	1.65	11.29	10.00	10.69	10.00	0.60	--------	38 50	9219
4.50	2.07	1.65	11.16	10.00	10.33	10.00	0.83	--------	41 00	8200
4.67	1.74	1.23	18.69	17.00	*10.39	12.00	8.30	5.00	43 70	9118
5.07	3.69	3.30	10.50	10.00	10.23	10.00	0.27	--------	53 00	8201
8.95	1.00	0.82	9.85	9.00	9.28	9.00	0.57	--------	31 50	8361
5.65	0.85	0.82	10.53	9.00	9.33	9.00	1.20	--------	36 00	8399
11.17	1.20	0.82	10.72	9.00	10.18	9.00	0.54	--------	37 50	9120
7.42	2.31	1.65	13.52	12.00	13.10	12.00	0.42	--------	38 50	9220
6.40	1.87	1.65	12.95	12.00	12.84	12.00	0.11	--------	--------	9387
10.20	1.85	1.65	12.37	12.00	12.00	12.00	0.37	--------	43 00	8202
4.85	2.78	2.47	10.48	10.00	10.21	10.00	0.27	--------	42 50	8355
10.42	2.43	2.47	10.84	10.00	*9.67	10.00	1.17	--------	60 00	8392
5.65	3.55	3.30	17.54	17.00	*9.24	14.00	8.30	3.00	75 00	8943
6.10	3.13	3.30	19.22	17.00	*11.91	14.00	7.31	3.00	63 00	8613
8.75	2.32	2.00	13.81	11.00	12.09	7.00	1.72	4.00	44 00	8211
8.10	1.82	1.65	15.38	14.00	11.64	10.00	3.74	4.00	38 00	8212
5.00	1.00	0.82	10.65	9.00	8.92	8.00	1.73	1.00	33 00	9247
4.92	1.14	0.82	12.22	11.00	10.40	10.00	1.82	1.00	40 00	8851
7.15	1.01	0.82	11.54	11.00	10.14	10.00	1.40	1.00	42 00	8710
9.42	2.03	1.65	13.33	11.00	11.16	10.00	2.17	1.00	45 00	9076
2.85	1.85	1.65	12.69	11.00	11.33	10.00	1.36	1.00	50 00	8942
5.22	1.68	1.65	11.61	11.00	10.13	10.00	1.48	1.00	50 00	8709
5.75	0.74	0.82	9.78	--------	8.75	8.00	1.03	--------	34 00	9340
6.77	0.87	0.82	9.31	--------	8.57	8.00	0.74	--------	33 00	8262
9.37	1.85	1.85	15.24	--------	13.06	13.00	2.18	--------	41 80	9228
5.85	1.33	1.25	11.03	--------	*9.12	10.00	1.91	--------	37 00	8302
7.45	1.54	1.25	11.23	--------	10.11	10.00	1.12	--------	35 80	8174
5.85	1.33	1.25	11.02	--------	*9.34	10.00	1.68	--------	40 00	8529
8.60	*1.33	1.65	11.23	--------	9.95	10.00	1.28	--------	42 00	8523
9.45	1.69	1.65	11.84	--------	10.65	10.00	1.19	--------	38 00	9347
6.47	1.13	0.82	11.25	--------	10.27	10.00	0.98	--------	35 00	8883
10.25	0.72	0.82	11.03	--------	*9.70	10.00	1.33	--------	35 00	8303
9.30	0.80	0.82	11.71	--------	10.49	10.00	1.22	--------	34 00	8526
7.50	0.87	0.82	12.25	--------	*11.31	12.00	0.94	--------	35 00	8524
7.12	1.08	0.82	12.69	--------	12.08	12.00	0.61	--------	36 00	9097
6.75	2.45	2.45	11.65	--------	10.69	10.00	0.96	--------	--------	8480
10.07	2.53	2.45	11.48	--------	10.32	10.00	1.16	--------	48 00	8940

*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE COE MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
9292	E. Frank Coe's XXV Ammoniated Phosphate, 1916.	W. A. Fisher, Milton,
8310	E. Frank Coe's XXV Ammoniated Phosphate, 1916.	Ward & Morris, Clearville,
8643	E. Frank Coe's XXV Ammoniated Phosphate, 1916.	A. F. Wentzel, Lorane,
8854	E. Frank Coe's Prolific Crop Producer, 1916,	The I. W. Scott Company, Pittsburgh,
	COLUMBIA GUANO COMPANY, ALLIED WITH F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
9305	Columbia Duplex Brand,	John Gardner, Millville,
8884	Columbia Gem Brand,	W. S. Minniom, Meadville,
9301	Columbia Quality Brand,	John Gardner, Millville,
9302	Columbia Winner Brand,	John Gardner, Millville,
	THE JAS. G. DOWNWARD CO., COATESVILLE, PA.	
8197	Ammoniated Phosphate,	M. S. Bailey, Malvern,
9399	Ammoniated Phosphate,	Brown & Rea, Quarryville,
8126	Ammoniated Phosphate,	A. C. Lehman, Palmyra,
	DUBOIS FERTILIZER WORKS, INC., DUBOIS, PA.	
9313	DuBois General Crop Grower,	Hibner Hoover Hardware Co., DuBois,
8503	DuBois General Crop Grower,	Mars Milling & Feed Co., Mars,
9312	DuBois Grain and Corn,	Hibner Hoover Hardware Co., DuBois,
8502	DuBois Grain and Corn,	Mars Milling & Feed Co., Mars,
8450	DuBois Grain and Corn,	H. V. Smith, Turbotville,
8799	DuBois Superb Fertilizer,	C. L. Bowersox, Middleburg,
9360	DuBois Superb Fertilizer,	A. C. Daugherty, Grove City,
	AMOS EBY & CO., LEAMAN PLACE, PA.	
8117	Pequa Ammoniated,	S. Clayton Rauck, Leaman Place,
8116	Pequa Economy,	S. Clayton Rauck, Leaman Place,
	THE FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.	
9393	Farmers Club Brand,	Kendig Brothers, Salunga,
8677	Farmers Crop Grower,	M. S. Graybill & Son, Bareville,
8347	Farmers Golden Sheaf,	J. C. Walker & Sons Co., Gap,
9099	Grain and Grass Special,	Belleville Flour Mills Co., Belleville,
8887	Grain and Grass Special,	B. F. Horting, Newport,
9401	Grain and Grass Special,	F. M. Mylin, Lancaster,
	JOSEPH R. GAWTHROP, KENNETT SQUARE, PA.	
8176	Ammoniated Special Phosphate for Corn, Oats and Wheat.	Joseph R. Gawthrop, Kennett Square,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
8827	Fish and Bone Mixture,	Alex. Hamilton, Venango,
9366	Fish and Bone Mixture,	J.W. Mohney, Jackson Center,
8181	Peerless Mixture,	S. K. Chambers & Brother, Elkview,
9359	Peerless Mixture,	Daniel Redfoot, Fredonia,
8731	Pure Dissolved Animal Bone,	Houck & Cherrington, Catawissa,
8407	Special Fish Mixture,	Harmony Cereal Mills, Harmony,
8823	Special Fish Mixture,	John Hostettler, Walnut,

PHORIC ACID FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	$	
8.85	0.98	0.82	11.99	11.00	10.88	10.00	1.11	1.00	32 00	9292
7.50	1.03	0.82	11.56	11.00	10.00	10.00	1.56	1.00	34 25	8310
8.42	0.91	0.82	10.56	11.00	*9.21	10.00	1.35	1.00	--------	8643
1.70	3.43	3.29	11.58	11.00	10.61	10.00	0.97	1.00	57 00	8854
6.87	1 92	1.65	10.72	10.50	*9.64	10.00	1.08	0.50	39 00	9305
3.97	0.85	0.82	10.73	10.50	*9.66	10.00	1.07	0.50	35 00	8884
8.25	*1.55	2.06	14.09	12.50	13.06	12.00	1.03	0.50	44 00	9301
4.20	1.18	0.82	8.74	8.50	7.94	8.00	0.80	0.50	31 00	9302
9.85	0.87	0.82	8.92	11.00	*8.10	10.00	0.82	1.00	34 00	8197
4.52	0.98	0.82	12.31	11.00	11.88	10.00	0.43	1.00	32 00	9399
7.35	0.90	0.82	7.96	11.00	*6.43	10.00	1.53	1.00	30 00	8126
7.52	*1.26	1.65	11.89	11.00	*8.73	10.00	3.16	1.00	27 00	9313
10.80	1.65	1.65	11.84	9.00	10.44	8.00	1.40	1.00	43 00	8503
5.47	0.90	0.82	11.99	9.00	8.05	8.00	3.94	1.00	25 00	9312
8.05	1.00	0.82	9.82	9.00	*7.72	8.00	2.09	1.00	34 00	8502
12.45	0.73	0.82	8.80	9.00	8.09	8.00	0.71	1.00	30 00	8450
5.40	0.79	0.82	12.05	11.00	10.03	10.00	2.02	1.00	32 70	8799
9.17	0.78	0.82	11.48	10.75	10.78	10.00	0.70	0.75	36 00	9360
8.02	1.23	1.03	12.14	11.00	10.00	10.00	2.14	1.00	34 00	8117
9.10	1.90	1.85	11.90	12.00	*9.39	10.00	2.51	2.00	40 00	8116
10.85	2.51	2.47	10.84	9.00	9.39	8.00	1.45	1.00	42 00	9393
9.20	0.96	0.82	9.22	9.00	8.28	8.00	0.94	1.00	39 65	8677
10.75	1.58	1.65	11.19	11.00	10.07	10.00	1.12	1.00	40 00	8347
5.92	0.99	0.82	11.70	11.00	11.38	10.00	0.32	1.00	34 00	9099
6.55	0.91	0.82	11.86	11.00	11.13	10.00	0.73	1.00	31 50	8887
9.62	0.95	0.82	10.91	11.00	10.72	10.00	0.19	1.00	--------	9401
7.24	1.24	1.00	8.23	7.00	8.18	6.00	0.05	1.00	33 00	8176
8.50	1.75	1.45	8.36	8.00	7.47	7.00	0.89	1.00	37 00	8827
8.70	1.72	1.45	8.42	8.00	7.57	7.00	0.85	1.00	36 00	9366
8.55	0.59	0.41	9.06	9.00	8.42	8.00	0.64	1.00	32 00	8181
9.82	0.85	0.41	10.01	9.00	8.65	8.00	1.36	1.00	30 00	9359
8.45	2.01	2.00	11.16	11.00	10.32	10.00	0.84	1.00	53 00	8731
6.55	1.33	1.25	11.00	11.00	10.40	10.00	0.60	1.00	35 00	8407
5.80	1.39	1.25	12.16	11.00	11.53	10.00	0.63	1.00	--------	8823

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	S. M. HESS & BROTHER, INC., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.	
9096	Ammoniated Grain Grower,	Farmers Supply Co., Belleville,
8822	Reliable Super Phosphate,	W. K. Poffenberger, Mifflintown,
9232	Standard Super Phosphate,	C. H. Christine, Hellertown,
8149	Standard Super Phosphate,	John D. Gibble, Lebanon,
8386	Standard Super Phosphate,	J. R. Iddings, Mifflinburg,
8388	Superior Super Phosphate,	A. E. Eisenhower, Lewisburg,
	M. P. HUBBARD CO., INC., BALTIMORE, MD.	
8612	Hubbard's Ever Ready Compound,	Mackey & Yerkes, Oxford,
	THE HUBBARD FERTILIZER COMPANY, BALTIMORE, MD.	
9012	Hubbard's Columbia Phosphate,	H. F. Hake, Wrightsville,
8812	Hubbard's Columbia Phosphate,	J. W. Klingler, Middle Creek,
8316	Hubbard's Columbia Phosphate,	J. Emory Moul, Ironore,
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.	
8829	Buffalo Crop Grower,	E. L. Smith & Co., Union City,
8541	Buffalo Two Ten,	E. H. Tucker, Colesburg,
	KEYSTONE BONE FERTILIZER CO., PHILADELPHIA, PA.	
8493	Keystone Ammoniated Super Phosphate,	Arthur Kemener, Lehighton,
9043	Keystone Ammoniated Super Phosphate,	P. K. Smith, Nescopeck,
	LANCASTER BONE FERTILIZER COMPANY, LANCASTER, PA.	
8651	Corn, Grass and Wheat Special,	Lancaster Bone Fertilizer Co., Fleetwood,
8917	Corn, Grass and Wheat Special,	Quarryville Farmers Association. Quarryville.
8214	Lancaster Ammoniated Bone Manure,	Wm. Albright, Cochranville,
8156	Lancaster Ammoniated Bone Manure,	Josiah Flinchbaugh, Windsor,
8130	Lancaster Ammoniated Bone Manure,	W. E. Uruch, Myerstown,
9394	Lancaster Favorite,	Harry Leedom, Mt. Joy,
	LANCASTER CHEMICAL COMPANY, LANCASTER, PA.	
8911	No. 11 Keystone Brand,	R. C. Collins, Quarryville,
9116	No. 12 Wheat Special,	The Western Penitentiary, Bellefonte,
9395	No. 14 Wheat and Grass,	R. C. Collins, Quarryville,
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
8282	Levan's Ammoniated Super Phosphate,	Hegins Grange, Hegins,
8890	Levan's Farmers Crop Grower 1-8-0,	C. F. Gelbach, Duncannon,
8124	Levan's Farmers Mixture,	A. B. Bamgardner, Palmyra,
9048	Levan's Farmers Mixture,	Harry Keffer, Pine Grove,
9059	Levan's Farmers Mixture,	McKeansburg Grange, Orwigsburg,
8743	Levan's Plow Brand 2-12-0,	A. C. Bittner, Catawissa,
8140	Levan's Plow Brand 2-12-0,	Aaron B. Grubb, Palmyra,
8283	Levan's Plow Brand 2-12-0,	Hegins Grange, Heigns,
	LISTER'S AGRICULTURAL CHEMICAL WORKS, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEWARK, N. J.	
8843	Lister's Crescent Ammoniated Superphosphate, 1916.	J. R. Hanks, Springboro,
8817	Lister's Crescent Ammoniated Superphosphate, 1916.	Herman & Bolig, Selinsgrove,

PHORIC ACID FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	$	
2.40	0.88	0.82	9.95	9.00	*7.69	8.00	2.26	1.00	32 75	9096
3.57	*2.01	2.47	11.81	11.00	10.75	10.00	1.06	1.00	38 00	8822
5.65	1.29	0.82	11.23	11.00	9.97	10.00	1.26	1.00	35 75	9232
6.27	1.13	0.82	11.20	11.00	9.99	10.00	1.21	1.00	35 50	8149
7.50	1.03	0.82	11.51	11.00	10.29	10.00	1.22	1.00	32 75	8386
3.57	1.80	1.65	12.22	11.00	10.03	10.00	2.19	1.00	39 10	8388
8.57	0.92	0.82	9.76	11.00	*9.35	10.00	0.41	1.00	35 00	8612
10.50	1.69	0.82	8.87	9.00	8.53	8.00	0.34	1.00	--------	9012
3.42	0.95	0.82	7.40	9.00	*6.83	8.00	0.57	1.00	32 05	8812
5.80	0.85	0.82	8.95	9.00	*7.65	8.00	1.30	1.00	31 00	8316
6.77	0.87	0.82	11.89	11.00	10.12	10.00	1.77	1.00	36 00	8829
9.15	*1.11	1.60	11.93	11.00	*9.58	10.00	2.35	1.00	39 50	8541
9.49	1.86	1.65	13.24	11.00	10.97	10.00	2.27	1.00	--------	8493
13.02	2.21	1.65	10.59	11.00	*9.53	10.00	1.06	1.00	37 50	9043
7.30	0.75	0.40	11.29	11.00	10.40	10.00	0.89	1.00	--------	8651
6.47	0.78	0.40	11.48	11.00	10.12	10.00	1.36	1.00	39 25	8917
8.57	1.26	0.82	9.57	10.00	*8.60	9.00	0.97	1.00	31 50	8214
7.80	1.23	0.82	10.13	10.00	9.12	9.00	1.01	1.00	36 00	8156
4.30	0.98	0.82	9.75	10.00	*8.55	9.00	1.20	1.00	34 00	8130
8.77	*1.33	1.60	11.16	11.00	10.20	10.00	0.96	1.00	39 00	9394
8.97	0.94	0.82	11.86	9.00	9.70	8.00	2.16	1.00	--------	8911
9.40	*1.02	1.65	10.97	11.00	9.99	10.00	0.98	1.00	36 00	9116
5.02	0.70	0.82	12.18	11.00	9.86	10.00	2.32	1.00	34 00	9395
11.60	*1.23	1.65	10.55	11.00	10.23	10.00	0.32	1.00	35 50	8282
5.72	0.98	0.82	7.95	9.00	*7.76	8.00	0.19	1.00	30 00	8890
9.65	0.88	0.82	10.43	11.00	10.16	10.00	0.27	1.00	30 50	8124
11.25	0.92	0.82	11.16	11.00	10.96	10.00	0.20	1.00	--------	9048
10.20	0.95	0.82	10.27	11.00	10.03	10.00	0.24	1.00	--------	9059
10.85	1.57	1.65	12.25	13.00	11.84	12.00	0.41	1.00	37 50	8743
9.72	1.70	1.65	11.93	13.00	*11.55	12.00	0.38	1.00	35 00	8140
10.80	1.69	1.65	11.58	13.00	*11.27	12.00	0.31	1.00	--------	8283
7.00	1.91	1.65	13.18	11.00	11.10	10.00	2.08	1.00	40 50	8843
2.85	1.78	1.65	12.31	11.00	10.08	10.00	2.23	1.00	40 50	8817

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*Deficient.

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
9234	Lister's Crescent Ammoniated Superphosphate, 1916.	R. D. Sames, Coopersburg,
8096	Lister's Plant Food, 1916,	H. E. Mullin, Christiana,
8097	Lister's Soil Improver,	H. E. Mullin, Christiana,
	THE MARTIN FERTILIZER CO., PHILADELPHIA, PA.	
9174	Martin's Ammoniated Phosphate 1-8-0,	E. J. Houck, Bangor,
9017	Martin's Ammoniated Phosphate 1-8-0,	A. L. Miller, York,
9016	Martin's Crop Producer,	A. L. Miller, York,
8590	Martin's Crop Producer,	Harry Pyle & Sons, Chadds Ford Junction,
8599	Martin's Pure Dissolved Animal Matter,	R. E. Mason, Hatboro,
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
8346	N. A. C. Brand Corn and Grain Mixture 2-10-0.	J. C. Walker & Sons Co., Gap,
8616	N. A. C. Brand Grain Mixture 1-10-0,	Edw. Brinton & Son, West Chester,
8739	N. A. C. Brand Universal Mixture 4-10-0,	William Hendrick, Numidia,
	G. OBER & SONS COMPANY, BALTIMORE, MD.	
8753	Ober's Electro Compound,	John Blocher, Gettysburg,
	OYLER & SPANGLER FERTILIZER WORKS, GETTYSBURG, PA.	
8751	Super Phosphate,	J. Q. Jacobs, Fairfield,
	PATAPSCO GUANO COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
9202	Patapsco Ammoniated Compound,	Jerry Seese, Quakertown,
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.	
8785	Piedmont Blue Ribbon Fertilizer,	John G. Simpson, Huntingdon,
8461	Piedmont Special Crop Grower,	H. B. Low & Son, Orangeville,
8786	Piedmont Special Crop Grower,	John G. Simpson, Huntingdon,
8221	Piedmont Utility Fertilizer,	Brown & Rea, Atglen,
	PITTSBURGH PROVISION AND PACKING CO., PITTSBURGH, PA.	
8860	Guano Fertilizer,	Beckert's Seed Store, Pittsburgh,
8859	Lawn Fertilizer,	Beckert's Seed Store, Pittsburgh,
	RASIN-MONUMENTAL COMPANY, BALTIMORE, MD.	
8742	Rasin's Special Crop Preparation,	Simon Carl, Numidia,
8559	Rasin's Special Crop Preparation,	J. D. Markle, Hanover,
8462	Rasin's Special Fish and Bone Guano,	H. B. Low & Son, Orangeville,
8380	Rasin's Special Fish and Bone Guano,	S. B. Miller, Mifflinburg,
9103	Rasin's Special Fish Mixture,	Kidder & Raymond, Oak Hall Station,
	READING BONE FERTILIZER CO., READING, PA.	
8546	Animal Tankage Mixture,	I. H. Dingman, Coudersport,
8427	Animal Tankage Mixture,	Thomas Faust, Leesport,
9024	Animal Tankage Mixture,	Edward Leinhard, Lehighton,
9246	Dissolved Animal Matter,	Geo. W. Dilliard, Bethlehem,
8544	Dissolved Animal Matter,	I. H. Dingman, Coudersport,
8542	Reading Special Grain and Grass Producer,	I. H. Dingman, Coudersport,
9179	Reading Special Grain and Grass Producer,	R. C. Frable, Pleasant Valley,
9158	Reading Special Grain and Grass Producer,	S. C. Kriebel, West Point,

PHORIC ACID FERTILIZERS—Continued.

	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.			
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	$	
8.50	1.98	1.65	9.57	11.00	*8.74	10.00	0.83	1.00	42 00	9234
7.95	0.91	0.82	11.54	11.00	10.29	10.00	1.25	1.00	34 00	8096
5.25	1.01	0.82	9.24	9.00	*7.28	8.00	1.96	1.00	32 00	8097
3.65	1.48	0.82	13.07	9.00	9.80	8.00	3.27	1.00	31 25	9174
8.69	0.71	0.82	11.93	9.00	10.30	8.00	1.63	1.00	32 50	9017
8.00	0.89	1.03	11.23	11.00	*9.23	10.00	2.00	1.00	36 00	9016
9.90	1.12	1.03	13.27	11.00	*9.74	10.00	3.53	1.00	34 50	8590
8.72	*1.41	1.65	15.75	----------	*10.95	12.00	4.80	--------	48 00	8599
8.57	1.67	1.65	10.17	11.00	9.89	10.00	0.28	1.00	40 00	8346
6.52	0.93	0.82	10.40	11.00	*9.76	10.00	0.64	1.00	34 00	8616
10.37	3.80	3.29	10.94	11.00	10.31	10.00	0.63	1.00	47 20	8739
9.20	1.27	0.82	10.72	11.00	10.11	10.00	0.61	1.00	--------	8753
2.40	1.01	0.82	10.69	----------	9.47	9.00	1.22	--------	--------	8751
8.92	0.88	0.82	11.03	11.00	10.71	10.00	0.32	1.00	31 75	9202
8.40	*2.07	2.47	10.46	----------	*8.65	10.00	1.81	--------	--------	8785
8.65	1.42	0.82	9.50	11.00	*8.20	10.00	1.30	1.00	34 00	8461
6.17	0.88	0.82	11.03	11.00	9.86	10.00	1.17	1.00	--------	8786
7.87	1.81	1.65	11.31	11.00	*9.80	10.00	1.51	1.00	36 50	8221
2.67	1.98	1.45	12.46	11.00	8.11	8.00	4.35	3.00	37 00	8860
3.70	3.28	2.87	16.49	16.00	9.32	4.00	7.17	12.00	60 00	8859
5.77	*1.44	1.65	13.46	11.00	11.05	10.00	2.41	1.00	40 00	8742
3.50	1.54	1.65	13.71	11.00	11.35	10.00	2.36	1.00	--------	8559
7.99	1.54	1.65	14.54	12.00	11.30	11.00	3.24	1.00	41 00	8462
9.65	1.84	1.65	14.47	12.00	11.60	11.00	2.87	1.00	38 20	8380
7.20	1.07	0.82	14.22	11.00	11.61	10.00	2.61	1.00	33 30	9103
4.77	1.84	1.64	16.89	15.00	*12.60	14.00	4.29	1.00	45 00	8546
8.07	1.79	1.64	16.93	15.00	*13.73	14.00	3.20	1.00	43 50	8427
9.05	1.60	1.64	17.22	15.00	15.31	14.00	1.91	1.00	42 00	9024
9.65	0.89	0.82	12.12	11.00	11.20	10.00	0.92	1.00	33 00	9246
10.72	0.85	0.82	11.15	11.00	10.51	10.00	0.64	1.00	35 00	8544
7.69	0.90	0.82	8.32	8.00	7.68	7.00	0.64	1.00	33 00	8542
5.95	0.88	0.82	8.42	8.00	7.72	7.00	0.70	1.00	34 00	9179
8.37	0.94	0.82	7.91	8.00	7.59	7.00	0.32	1.00	35 00	9158

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
8543	Reading Special Potato and Tobacco Manure.	I. H. Dingman, Coudersport,
8428	Reading Special Potato and Tobacco Manure.	Thomas Faust, Leesport,
9177	Reading Special Potato and Tobacco Manure.	R. C. Frable, Pleasant Valley,
	READING CHEMICAL COMPANY, READING, PA.	
9343	Farmers Favorite,	M. R. Brumbaugh, Martinsburg,
8239	Farmers Favorite,	C. E. Frazier, Mill Hall,
9282	Farmers Favorite,	Thos. Houghton, Montrose,
8308	Farmers Meat Mixture,	Everett Hardware Co., Everett,
8243	Farmers Meat Mixture,	H. L. McCloskey, Beech Creek,
9309	Farmers Meat Mixture,	Reynoldsville Hardware Co., Reynoldsville,
8959	Reading Early Truck, Tobacco and Potato,	Harry Murry, Myerstown,
8655	Reading Grain Special,	D. H. Latshaw, Bechtelsville,
8528	Reading Grain Special,	J. A. Murdoch, Knoxville,
8705	Reading Grain Special,	Nels Stransburg, Ridgway,
8654	Reading Pennant Winner,	D. H. Latshaw, Bechtelsville,
8972	Reading Soil Builder,	Yeakel & Huzzard, Norristown,
	ROBERT A. REICHARD, ALLENTOWN, PA.	
8736	Reichard's Lehigh Special,	Ellis Artley, Catawissa,
9210	Reichard's Lehigh Special,	Robert A. Reichard, Allentown,
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
8976	Royster's Defender Brand,	Henry Zook, Elverson,
9077	Royster's Honor Brand,	F. C. Deveny, Forest City,
8248	Royster's Honor Brand,	Glossner Implement Co., Lock Haven,
8767	Royster's Honor Brand,	J. F. & H. O. Neuhaus, Glen Rock,
9135	Royster's Keystone Brand,	J. A. Gardner, Moscow,
8095	Royster's Keystone Brand,	H. E. Mullin, Christiana,
9200	Royster's Keystone Brand,	Henry L. Romig, Emaus,
8183	Royster's Purity Brand,	S. K. Chambers & Brother, Elkview,
9078	Royster's Purity Brand,	F. C. Deveny, Forest City,
8445	Royster's Purity Brand,	McConnell Brothers, Hughesville,
8184	Royster's Royal Blue Brand,	S. K. Chambers & Brother, Elkview,
8251	Royster's Royal Blue Brand,	Glossner Implement Co., Lock Haven,
8706	Royster's Royal Blue Brand,	A. S. Payne, Marienville,
8626	Royster's Simplex Brand,	Carl H. H. Bauman, Scranton,
8249	Royster's Simplex Brand,	Glossner Implement Co., Lock Haven,
	RUTLAND FIRE CLAY CO., RUTLAND, VT.	
8858	Plantene,	The I. W. Scott Company, Pittsburgh,
	THE SCOTT FERTILIZER COMPANY, ELKTON, MD.	
8193	Scott's Grain Special,	Edw. W. Rupert, Oxford,
	M. L. SHOEMAKER & CO., INC., PHILADELPHIA, PA.	
8967	Swift-Sure for Spring Trade,	William Bowman, Lebanon,
9163	Swift-Sure for Spring Trade,	John W. Root, Kimberton,
9224	Swift-Sure Good Enough,	M. O. Johnson, Hellertown,
9162	Swift-Sure Good Enough,	John W. Root, Kimberton,
9027	Swift-Sure Good Enough,	L. A. Steigerwalt, Andreas,
	THE SMITH AGRICULTURAL CHEMICAL COMPANY, COLUMBUS, OHIO.	
8837	Smith's Wheat Maker and Seeding Down,	Geo. J. Abbey, West Springfield,

PHORIC ACID FERTILIZERS—Continued.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	$	
5.87	0.88	0.82	13.92	13.00	*10.86	12.00	3.06	1.00	37 00	8543
7.05	1.00	0.82	14.92	13.00	12.84	12.00	2.08	1.00	37 50	8428
5.75	0.95	0.82	14.92	13.00	12.41	12.00	2.51	1.00	38 50	9177
10.37	0.68	0.82	11.23	11.00	9.93	10.00	1.30	1.00	34 00	9343
9.97	1.10	0.82	11.12	11.00	10.04	10.00	1.08	1.00	31 85	8239
5.15	0.84	0.82	10.72	11.00	9.89	10.00	0.83	1.00	36 00	9282
6.95	*0.55	0.82	11.61	9.00	9.31	8.00	2.30	1.00	32 00	8308
8.47	0.78	0.82	8.31	9.00	*7.29	8.00	1.02	1.00	30 00	8243
4.85	0.80	0.82	9.50	9.00	8.66	8.00	0.84	1.00	35 00	9309
7.60	*2.48	3.28	10.70	11.00	9.81	10.00	0.89	1.00	52 00	8959
5.52	0.65	0.41	8.78	9.00	8.27	8.00	0.51	1.00	31 50	8655
4.20	0.92	0.41	9.41	9.00	8.08	8.00	1.33	1.00	32 00	8528
5.72	0.67	0.41	8.93	9.00	8.22	8.00	0.71	1.00	35 00	8705
9.74	*2.25	2.46	9.85	11.00	*9.19	10.00	0.66	1.00	47 25	8654
8.77	*1.31	1.65	11.29	11.00	10.70	10.00	0.59	1.00	43 00	8972
8.40	1.73	1.64	10.78	11.00	9.96	10.00	0.82	1.00	38 00	8736
8.42	2.14	1.64	9.76	11.00	*9.44	10.00	0.32	1.00	39 25	9210
4.15	3.28	3.29	11.61	8.50	9.17	8.00	2.44	0.50	--------	8976
4.25	1.93	1.65	11.23	10.50	9.83	10.00	1.40	0.50	41 50	9077
7.75	1.61	1.65	10.74	10.50	*9.26	10.00	1.48	0.50	44 00	8248
5.30	1.60	1.65	11.10	10.50	9.82	10.00	1.28	0.50	40 00	8767
9.15	2.38	2.06	13.52	12.50	12.12	12.00	1.40	0.50	47 50	9135
3.97	2.69	2.06	14.48	12.50	12.09	12.00	2.39	0.50	46 00	8095
8.45	2.14	2.06	12.56	12.50	*11.16	12.00	1.40	0.50	40 63	9200
6.50	0.85	0.82	9.49	8.50	8.43	8.00	1.06	0.50	34 00	8183
5.02	1.35	0.82	9.89	8.50	8.86	8.00	1.03	0.50	33 75	9078
6.20	0.89	0.82	8.95	8.50	8.07	8.00	0.88	0.50	32 50	8445
6.92	1.00	0.82	11.19	10.50	10.00	10.00	1.19	0.50	36 00	8184
5.82	0.93	0.82	10.24	10.50	*9.12	10.00	1.12	0.50	39 00	8251
6.07	0.98	0.82	11.35	10.50	10.09	10.00	1.26	0.50	42 00	8706
6.95	2.73	2.47	9.82	9.50	*8.46	9.00	1.36	0.50	50 00	8626
6.10	*2.24	2.47	10.54	9.50	9.05	9.00	1.49	0.50	53 00	8249
4.12	*3.54	4.10	11.94	9.00	11.39	8.00	0.55	1.00	--------	8858
7.47	1.01	0.82	11.06	11.00	10.07	10.00	0.99	1.00	35 00	8193
8.32	1.87	1.65	16.01	14.00	15.35	12.00	0.66	2.00	--------	8967
9.57	1.72	1.65	16.77	14.00	14.32	12.00	2.45	2.00	43 00	9163
5.20	1.26	0.82	17.48	14.00	16.74	13.00	0.74	1.00	39 00	9224
7.25	1.02	0.82	17.22	14.00	15.97	13.00	1.25	1.00	39 00	9162
6.95	1.15	0.82	17.60	14.00	17.22	13.00	0.38	1.00	35 00	9027
5.12	0.50	0.41	12.59	----------	12.05	12.00	0.54	--------	29 00	8837

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*Deficient.

TABLE II.—NITROGEN AND PHOS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE SOUTHERN FERTILIZING CO., BALTIMORE, MD.	
8662	Mogul Fertilizer,	S. M. Grim, Paxatannia,
	SWIFT & COMPANY, BALTIMORE, MD.	
8180	Swift's Ammoniated Phosphate,	S. K. Chambers & Brother, Elkview,
8670	Swift's Ammoniated Phosphate,	E. B. Fritz Sons Co., Quarryville,
9255	Swift's Ammoniated Phosphate,	E. H. Johnson, Ulster,
8458	Swift's Corn and Grain Grower,	A. W. Eves, Millville,
8460	Swift's Phosphate Fertilizer,	S. R. Kline, Benton,
8537	Swift's Special Corn Grower,	Eulalia Milling Co., Coudersport,
9195	Swift's Special Corn Grower,	Wm. T. Guth, Macungie,
8285	Swift's Special Corn Grower,	M. S. Schwalm, Hegins,
9379	Swift's Tankage and Phosphate,	C. M. Amon, Transfer,
8402	Swift's Tankage and Phosphate,	P. J. Oesterling & Son, Butler,
9349	Swift's Tankage and Phosphate,	R. G. Young's Sons, New Gallilee.
	TAYLOR PROVISION CO., TRENTON, N. J.	
9149	John Taylor's Standard Grain Grower, Revised.	T. B. McIlhatten, Hatboro,
	I. P. THOMAS & SON COMPANY, PHILADELPHIA, PA.	
8991	Thomas Triumph Manure,	Henry Zook, Elverson,
8924	Thomas Wheat and Corn Guano,	Rohrer Brothers, Ronks,
9241	Wheat Special,	G. A. Hayden, Nazareth,
	F. W. TUNNELL & COMPANY, INC., PHILADELPHIA, PA.	
8227	Fish Manure,	W. B. Passmore, Embreeville,
8442	Grain Manure,	E. S. Artley, Pennsdale,
8146	Grain Manure,	Lorenza Laudermilck, Lebanon,
8229	Grain Manure,	W. B. Passmore, Embreeville,
8971	Lightening Guano,	Edw. Brinton & Son, West Chester,
8592	No. 1 Potato and Truck Manure,	Wm. M. Frost & Co., Holmesburg,
8228	Potato and Vegetable Manure,	W. B. Passmore, Embreeville,
	THE J. E. TYGERT COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL COMPANY, PHILADELPHIA, PA.	
8531	Ammoniated Fertilizer, AA,	F. A. Ackley, Westfield,
9045	Ammoniated Fertilizer, AA,	Emil Frederick, Conyngham,
8597	Ammoniated Fertilizer, AA,	Mullin Brothers, Bustleton,
8595	Great Advancer Phosphate, 1916,	Mullin Brothers, Bustleton,
9160	Pawnee Phosphate,	W. M. Keyser, Oaks,
	UNION CHEMICAL WORKS, INC., NORTH WALES, PA.	
9156	One-Eight Mixture,	Chas. Wegscheider, Line Lexington,
9154	Two-Ten Mixture,	Chas. Wegscheider, Line Lexington,
	VIRGINIA CAROLINA CHEMICAL COMPANY OF DELAWARE, NEW YORK, N. Y.	
8898	V-C Monarch Brand,	John S. Zimmerman, Terre Hill,
8692	V-C Special Fish preparation,	John S. Zimmerman, Terre Hill,
	YORK CHEMICAL WORKS, YORK, PA.	
8684	Dempwolf's Prosperity,	H. M. Stauffer & Son, Leola,
8682	Dempwolf's Two and Ten,	H. M. Stauffer & Son, Leola,
		Average,

PHORIC ACID FERTILIZERS—Concluded.

Moisture.	NITROGEN.		PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
			Total.		Available.		Insoluble.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	%	%	$	
6.82	0.86	0.82	10.87	11.00	10.59	10.00	0.28	1.00	33 00	8662
5.00	0.83	0.82	10.72	10.00	10.27	10.00	0.45	--------	36 00	8180
3.32	1.17	0.82	10.46	10.00	*9.76	10.00	0.70	--------	32 50	8670
5.10	1.10	0.82	10.52	10.00	10.26	10.00	0.26	--------	38 00	9255
6.42	1.24	1.23	11.03	12.00	*10.65	12.00	0.38	--------	40 50	8458
3.70	1.31	0.82	18.08	20.00	*9.72	13.00	8.36	7.00	39 50	8460
3.12	1.73	1.65	10.40	10.00	9.83	10.00	0.57	--------	35 00	8537
4.82	1.85	1.65	8.87	10.00	*7.53	10.00	1.34	--------	37 99	9195
7.70	1.99	1.65	9.09	10.00	*8.71	10.00	0.38	--------	42 50	8285
7.62	1.10	0.82	13.84	12.50	12.07	12.00	1.77	0.50	36 50	9379
6.65	0.73	0.82	15.24	12.50	13.30	12.00	1.94	0.50	39 00	8402
5.72	1.06	0.82	14.41	12.50	12.11	12.00	2.30	0.50	38 00	9349
5.87	1.28	0.82	10.65	10.00	9.26	9.00	1.39	1.00	45 00	9149
10.90	0.84	0.82	10.27	10.50	*9.66	10.00	0.61	0.50	37 50	8991
10.42	1.68	1.65	11.12	10.50	10.69	10.00	0.43	0.50	40 00	8924
10.77	1.49	0.41	11.35	--------	*10.79	12.00	0.56	--------	30 50	9241
8.40	1.93	1.64	12.43	11.00	10.43	10.00	2.00	1.00	41 00	8227
8.50	0.90	0.82	14.54	13.00	13.16	12.00	1.38	1.00	35 00	8442
8.70	1.35	0.82	13.99	13.00	12.20	12.00	1.79	1.00	--------	8146
9.92	0.93	0.82	11.03	13.00	*9.37	12.00	1.66	1.00	35 00	8229
13.35	3.94	4.12	9.82	9.00	*7.35	8.00	2.47	1.00	58.00	8971
7.12	3.30	3.30	11.54	11.00	9.92	10.00	1.62	1.00	57 00	8592
11.25	1.80	1.64	13.11	11.00	10.84	10.00	2.27	1.00	40 00	8228
7.25	2.13	1.65	10.49	11.00	*9.39	10.00	1.10	1.00	45 00	8531
7.15	2.01	1.65	11.54	11.00	10.42	10.00	1.12	1.00	--------	9045
3.90	2.20	1.65	11.61	11.00	10.74	10.00	0.87	1.00	42 50	8597
9.05	3.23	3.29	11.42	11.00	10.43	10.00	0.99	1.00	54 25	8595
2.62	1.18	0.82	11.54	9.00	10.14	8.00	1.40	1.00	34 50	9160
3.12	1.24	0.82	9.25	8.00	8.42	8.00	0.83	--------	33 00	9150
4.72	1.80	1.64	10.84	10.00	10.20	10.00	0.64	--------	40 50	9154
9.12	1.75	1.65	15.00	12.00	12.37	11.00	2.63	1.00	27 50	8898
8.25	0.90	0.82	12.27	11.00	10.42	10.00	1.85	1.00	31 00	8692
9.92	1.53	1.64	13.14	12.00	12.31	12.00	0.83	--------	42 00	8684
9.42	1.79	1.64	13.33	10.00	10.19	10.00	3.14	--------	47 00	8682
7.10	1.48	--------	11.63	--------	10.10	--------	1.53	--------	$38 49	--------

*Deficient.

TABLE NO. III—GROUND

Furnishing Nitrogen

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
8299	Fine Ground Bone,	John A. Crilly, Imler,
9276	Fine Ground Bone,	J. C. Leighton, Tunkhannock,
9339	Fine Ground Bone,	Stultz Brothers, Hollidaysburg,
8293	Pure Bone Meal,	John A. Crilly, Imler,
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.	
8352	Bone Meal,	J. C. Walker & Sons Co., Gap,
	BAUGH & SONS COMPANY, PHILADELPHIA, PA.	
8621	Baugh's Bone Flour,	B. E. & J. F. Cokley, Scranton,
8617	Baugh's Pure Steamed Bone,	B. E. & J. F. Cokley, Scranton,
8185	Baugh's Pure Steamed Bone,	O. W. Shortlidge, Lincoln University,
	THE BERG COMPANY, PHILADELPHIA, PA.	
8614	Berg's Three and Fifty Bone,	W. H. Walker & Co., Kennett Square,
	BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
9354	Bowker's Fresh Ground Bone,	G. W. Walton Hardware Co., Beaver,
	THE COE MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
8637	Fine Ground Bone,	Abington Lumber Co., Dalton,
9074	Fine Ground Bone,	E. E. White, Adelia,
	JACOB DOLD PACKING CO., BUFFALO, N. Y.	
8254	Dold Quality Bone Meal,	R. J. Dunham, Wellsboro,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
8922	Soft Ground Bone Meal,	Willis C. Herr, Strasburg,
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.	
8257	Buffalo Bone Meal,	Decker & Cook, Mansfield,
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
8144	Levan's Pure Fine Ground Bone Meal,	Aaron B. Grubb, Palmyra,
	LISTER'S AGRICULTURAL CHEMICAL WORKS, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEWARK, N. J.	
9324	Lister's Bone Meal, 1916,	A. S. Kelly, Ebensburg,
	THE MARTIN FERTILIZER CO., PHILADELPHIA, PA.	
8992	Martin's Pure Ground Bone,	R. C. Fairlamb & Sons, Brandywine Summit.
8591	Martin's Pure Ground Bone,	Harry Pyle & Sons, Chadds Ford Junction,

BONE FERTILIZERS.

and Phosphoric Acid.

	CHEMICAL ANALYSIS.				MECHANICAL ANALYSIS.		Selling price per ton at place of selection.	Chemist's number.
	NITROGEN.		PHOSPHORIC ACID.					
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Fine.	Coarse.		
%	%	%	%	%	%	%	$	
11.92	2.69	2.47	23.66	22.88	50	50	$60 00	8299
11.35	3.31	2.47	24.24	22.88	40	60		9276
9.75	2.85	2.47	24.36	22.88	55	45	80 00	9339
8.97	4.18	3.70	22.96	21.51	48	52	65 00	8293
4.50	5.25	2.47	*15.30	22.00	51	49	56 00	8352
9.65	3.63	3.30	22.13	18.30	70	30	80 00	8621
9.75	3.64	1.65	*22.96	25.00	69	31	67 50	8617
12.90	2.11	1.65	25.03	25.00	64	36	58 00	8185
3.60	2.80	2.47	26.47	23.00	88	12	62 00	8614
5.70	2.87	2.47	24.17	22.88	74	26	per lb. †6c	9354
11.17	2.89	2.47	22.85	22.88	60	40	66 00	8637
2.97	3.16	2.47	24.68	22.88	40	60	56 00	9074
6.10	3.14	2.47	*21.88	23.00	77	23	55 00	8254
3.00	2.49	2.50	13.81	11.00	72	28	60 00	8922
5.67	3.35	2.50	*21.43	22.00	72	28	50 75	8257
2.52	2.55	2.47	24.90	22.89	58	42	62 00	8144
7.70	2.63	2.47	25.13	22.88	53	47	55 00	9324
4.07	2.47	2.47	26.72	22.90	60	40	60 00	8992
6.72	2.39	2.47	26.28	22.90	55	45	58 00	8591

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*Deficient.
†Excluded from average.

TABLE III—GROUND BONE

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	PITTSBURGH PROVISION AND PACKING CO., PITTSBURGH, PA.	
8862	Bone Meal Fertilizer,	Beckert's Seed Store, Pittsburgh,
8853	Bone Meal Fertilizer,	The I. W. Scott Company, Pittsburgh,
8861	Pure Raw Bone Meal Flour,	Beckert's Seed Store, Pittsburgh,
	ROBERT A. REICHARD, ALLENTOWN, PA.	
8737	Reichard's Steamed Bone Meal,	Ellis Artley, Catawissa,
9207	Reichard's Steamed Bone Meal,	Robert A. Reichard, Allentown,
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
8627	Royster's Fine Ground Bone Meal,	Carl H. H. Bauman, Scranton,
9317	Royster's Fine Ground Bone Meal,	Kurtz Coal, Lumber and Supply Co., Punxsutawney.
8977	Royster's Fine Ground Bone Meal,	Henry Zook, Elverson,
8588	Royster's Pure Raw Bone Meal,	Harvey Spencer, Cochranville,
	M. L. SHOEMAKER & CO., INC., PHILADELPHIA, PA.	
8605	Swift Sure Bone Meal,	W. E. Ervin & Son, Somerton,
	SWIFT & COMPANY, BALTIMORE, MD.	
8424	Swift's Raw Bone Meal Fertilizer,	W. E. Schmick, Hamburg,
	YORK CHEMICAL WORKS, YORK, PA.	
8204	Dempwolf's Pure Ground Bone,	Thomas, Haines Co., Malvern,
		Average,

FERTILIZERS—Concluded.

Moisture.	CHEMICAL ANALYSIS.				MECHANICAL ANALYSIS.		Selling price per ton at place of selection.	Chemist's number.
	NITROGEN.		PHOSPHORIC ACID.					
	Found.	Guaranteed.	Found.	Guaranteed.	Fine.	Coarse.		
%	%	%	%	%	%	%	$	
3.82	3.86	3.70	21.11	21.00	75	25	47 00	8862
4.17	3.85	3.70	21.56	21.00	79	21	45.00	8853
3.17	*3.10	4.11	22.41	16.00	99	1	58 00	8861
7.35	*2.63	2.88	26.15	22.00	77	23	46 50	8737
8.45	3.17	2.88	25.77	22.00	51	49	51 50	9207
4.57	2.80	2.47	24.87	22.90	58	42	60 00	8627
3.40	2.41	2.47	26.09	22.90	58	42	48 00	9317
6.12	2.39	2.47	24.75	22.90	63	37	----------	8977
8.87	4.20	3.70	23.79	21.50	34	66	63 50	8588
3.47	5.02	4.50	23.60	20.00	80	20	65 00	8605
8.27	4.26	3.70	23.60	23.00	66	34	----------	8424
3.74	*2.02	2.46	25.14	23.00	54	46	57 00	8204
6.56	3.16	----------	23.48	----------	63	37	$58 77	----------

*Deficient.

TABLE NO. IV.—ACIDULATED

Furnishing

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
8513	14% Acid Phosphate,	A. Krause & Son, Marwood,
8342	16% Acid Phosphate,	J. C. Brubaker, Lititz,
8640	16% Acid Phosphate,	F. L. Miller, Edella,
9187	Basic Lime Phosphate,	Ira Burgstresser, Ottsville,
8757	Basic Lime Phosphate,	Burtus Eisenhart, East Berlin,
8305	Josiah Cope's High Grade Superphosphate.	J. S. Hershberger, Everett,
8789	Josiah Cope's High Grade Superphosphate,	Petersburg Grain, Feed & Supply Co., Petersburg.
8931	Nassau High Grade Superphosphate,	J. H. Brown, Loysburg,
9243	Patapsco Pure Dissolved S. C. Phosphate,	Joseph L. Sandt, Easton,
8814	Susquehanna Dissolved S. C. Rock,	J. O. Wagner, Beaver Springs,
8138	Susquehanna High Grade Superphosphate,	W. O. Krall, Myerstown,
8813	Susquehanna High Grade Superphosphate,	J. O. Wagner, Beaver Springs,
8298	Wheeler's High Grade Acid Phosphate,	S. C. Exline, Imler,
9185	Wheeler's High Grade Acid Phosphate,	E. P. Koplin, Easton,
8242	Wheeler's High Grade Acid Phosphate,	J. Harold Long Milling Co., Flemington,
	THE AMERICAN AGRICULTURAL CHEMICAL CO., THE POLLOCK FERTILIZER CO. BRANCH, BALTIMORE, MD.	
8781	Pollock's Dissolved S. C. Phosphate,	H. O. Andrews, Mapleton Depot,
8291	Pollock's Dissolved S. C. Phosphate,	Blackburn Milling Co., Cessna,
9095	Pollock's High Grade Superphosphate,	Jas. A. Harkness, Reedsville,
8777	Pollock's High Grade Superphosphate,	Irvin Earnest, Point,
8932	Pollock's High Grade Superphosphate,	J. L. Longenecker, Woodbury,
	AMERICAN FERTILIZING COMPANY, BALTIMORE, MD.	
8366	American Acid Phosphate,	J. H. Neidigh, State College,
8105	American High Grade Acid Phosphate,	Jones Eavenson, Christiana,
8759	American High Grade Acid Phosphate,	Burtus Eisenhart, East Berlin,
8367	American High Grade Acid Phosphate,	J. H. Neidigh, State College,
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.	
8398	Acid Phosphate,	Frank Douglass, Indiana,
8441	Acid Phosphate,	Willis Koch, Pottsgrove,
8873	Acid Phosphate,	H. B. Mitchell, & Co., Emlenton,
8188	Acid Phosphate,	O. W. Shortlidge, Lincoln University,
	BAUGH & SONS COMPANY, PHILADELPHIA, PA.	
8619	Baugh's 14% Acid Phosphate,	B. E. & J. F. Cokley, Scranton,
8357	Baugh's 16% Acid Phosphate.	J. H. Brinton, Gap,
8391	Baugh's 16% Acid Phosphate,	Thomas K. George, Homer City,
9089	Baugh's 16% Acid Phosphate,	F. R. Varcoe, Waymarth,
	BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
9382	Bowker's Acid Phosphate,	Patterson & Wilson, Mercer,
9330	Bowker's Acid Phosphate,	H. L. Stultz & Brother, Altoona,
9084	Bowker's Soluble Phosphate,	J. B. Dyamond, Waymarth,
	S. B. BRODBECK, BRODBECKS, PA.	
8769	Brodbeck's Ruth Dissolved Phosphate,	M. W. Brodbeck, Brodbecks,
	THE BRYANT FERTILIZER COMPANY, ALEXANDRIA, VA.	
8831	Bryant's 16% Acid Phosphate,	Union City Cooperative Association, Union City.

PHOSPHATE FERTILIZERS.

Phosphoric Acid.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	TOTAL.		AVAILABLE.		INSOLUBLE.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	$	
6.15	15.18	15.00	13.85	14.00	1.33	1.00	29 00	8513
4.57	17.34	17.00	16.28	16.00	1.06	1.00	26 25	8342
3.85	17.90	17.00	17.05	16.00	0.85	1.00	30 00	8640
4.52	14.61	14.00	*12.25	13.00	2.36	1.00	30 00	9187
2.10	16.52	14.00	13.54	13.00	2.98	1.00	27 50	8757
7.15	17.26	17.00	16.56	16.00	0.70	1.00	29 00	8305
6.40	17.73	17.00	16.74	16.00	0.99	1.00	28 75	8789
4.67	18.30	17.00	17.75	16.00	0.55	1.00	28 00	8931
6.42	15.43	15.00	14.24	14.00	1.19	1.00	26 50	9243
3.15	16.30	15.00	15.53	14.00	0.77	1.00	26 15	8814
6.35	17.22	17.00	16.10	16.00	1.12	1.00	28 00	8138
3.22	17.62	17.00	16.95	16.00	0.67	1.00	27 65	8813
5.87	17.09	17.00	15.97	16.00	1.12	1.00	29 00	8298
5.32	18.18	17.00	17.11	16.00	1.07	1.00	24 25	9185
8.92	16.45	17.00	16.32	16.00	0.13	1.00	29 40	8242
3.22	16.17	15.00	14.38	14.00	1.79	1.00	28 00	8781
4.82	16.07	15.00	14.32	14.00	1.75	1.00	27 30	8291
3.85	17.22	17.00	16.82	16.00	0.40	1.00	29 25	9095
4.35	17.76	17.00	16.73	16.00	1.03	1.00	28 50	8777
4.75	17.83	17.00	16.66	16.00	1.17	1.00	28 00	8932
10.20	17.51	15.00	16.46	14.00	1.05	1.00	27 00	8366
6.20	15.92	17.00	*15.54	16.00	0.38	1.00	26 50	8105
10.75	15.56	17.00	*14.72	16.00	0.84	1.00	27 50	8759
8.72	18.58	17.00	17.27	16.00	1.31	1.00	28 25	8367
8.20	16.72	16.50	16.59	16.00	0.13	0.50	29 50	8398
7.30	17.45	16.50	16.49	16.00	0.96	0.50	28 50	8441
5.75	17.60	16.50	16.90	16.00	0.70	0.50	28 00	8873
9.57	16.24	16.50	15.98	16.00	0.26	0.50	27 50	8188
5.90	14.41	14.00	14.18	14.00	0.23	----------	32 00	8619
11.20	17.02	16.00	16.85	16.00	0.17	----------	26 00	8357
7.10	17.88	16.00	17.38	16.00	0.50	----------	30 00	8391
6.20	17.92	16.00	17.49	16.00	0.43	----------	32 00	9089
3.15	18.11	17.00	16.63	16.00	1.48	1.00	28 00	9382
2.97	18.88	17.00	17.83	16.00	1.05	1.00	32 00	9330
6.92	16.20	15.00	15.00	14.00	1.20	1.00	31 00	9084
9.52	15.43	15.00	15.32	14.00	0.11	1.00	25 00	8769
5.07	16.39	17.50	*15.80	16.00	0.59	1.50	28 50	8831

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*Deficient.

TABLIE IV.—ACIDULATED

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE CENTRAL CHEMICAL COMPANY, HAGERSTOWN, MD.	
9098	Dissolved Phosphate, 14%,	Jacob Zook, Belleville,
8779	Dissolved Phosphate,	C. F. Fendrich, Mercersburg,
8804	Dissolved Phosphate,	Reed Ritter, Beavertown,
9259	Dissolved Phosphate,	Wyalusing Hay Co., Wyalusing,
	CHESAPEAKE CHEMICAL CO., BALTIMORE, MD.	
9363	Chesapeake 16% Dissolved Phosphate,	W. M. Osborn & W. H. Haylett, Sandy Lake.
9406	Chesapeake 16% Dissolved Phosphate,	H. W. Rehmeyer, Turnpike,
	THE COE MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
9064	E. Frank Coe's Basic Fruit and Legume Phosphate (Basic Lime Phosphate), (Key Plow Brand).	Clinton Gerber, Cressona,
8635	E. Frank Coe's 16% Superphosphate,	Abington Lumber Co., Dalton,
9083	E. Frank Coe's 16% Superphosphate,	A. B. Walker, Hamlin,
9173	E. Frank Coe's 16% Superphosphate,	E. E. White, Adelia,
	COLUMBIA GUANO COMPANY, ALLIED WITH F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
8622	Columbia 16% Acid Phosphate,	G. R. Clark, Scranton,
	THE CONSUMERS CHEMICAL CORPORATION, AFFILIATED WITH VIRGINIA-CAROLINA CHEMICAL COMPANY OF DELAWARE, NEW YORK, N. Y.	
8946	Diamond Phosphate,	E. H. Hays, Clintondale,
9126	Diamond Phosphate,	H. S. Lockwood, South Canaan,
8945	Sterling Phosphate,	E. H. Hays, Clintondale,
8630	Sterling Phosphate,	F. L. Thompson, Clarks Summit,
	DUBOIS FERTILIZER WORKS, INC., DUBOIS, PA.	
8720	DuBois 16% Acid Phosphate Fertilizer,	Carl Fredell, Mt. Jewett,
8499	DuBois 16% Acid Phosphate Fertilizer,	H. F. Gelbach, Evans City,
	EASTERN GUANO COMPANY, NEW YORK, N. Y.	
9344	Eastern Dissolved Phosphate,	Shippensburg Elevator Co., Shippensburg,
8510	Eastern Dissolved Phosphate,	S. W. Thompson, Butler,
8540	Eastern Dissolved Phosphate,	Fred Walker, Knoxville,
	THE FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.	
8888	Acid Phosphate,	B. F. Hortning, Newport,
8348	Acid Phosphate,	J. C. Walker & Sons Co., Gap,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
8828	High Grade 16% Acid Phosphate,	Alex Hamilton, Venango,
8923	High Grade 16% Acid Phosphate,	Willis S. Herr, Strasburg,
8806	High Grade 16% Acid Phosphate,	Edward Lepley, Beavertown,
	S. M. HESS & BROTHER, INC., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.	
8505	High Grade Acid Phosphate,	Geo. H. Baker, Valencia,

PHOSPHATE FERTILIZERS—Continued.

	PHOSPHORIC ACID.							
	TOTAL.		AVAILABLE.		INSOLUBLE.			
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Selling price per ton at place of selection.	Chemist's number
%	%	%	%	%	%	%	$	
6.67	15.82	------------	15.56	14.00	0.26	----------	27 75	9098
7.15	17.51	16.50	16.07	16.00	1.44	0.50	27 00	8779
5.35	17.28	16.50	16.36	16.00	0.92	0.50	27 20	8804
6.77	17.78	16.50	16.91	16.00	0.82	0.50	27 50	9259
7.27	17.35	17.00	17.25	16.00	0.10	1.00	26 00	9363
8.00	17.28	17.00	16.78	16.00	0.50	1.00	24 50	9006
8.17	14.86	14.00	*12.02	13.00	2.84	1.00	----------	9064
6.00	17.77	17.00	16.53	16.00	1.24	1.00	30 00	8635
4.77	18.14	17.00	16.85	16.00	1.29	1.00	26 35	9083
5.10	17.67	17.00	17.06	16.00	0.61	1.00	28 25	9073
8.75	18.37	16.50	18.05	16.00	0.32	0.50	30 00	8622
8.97	16.14	15.00	15.50	14.00	0.64	1.00	26 85	8946
6.07	17.99	15.00	16.63	14.00	1.36	1.00	30 00	9126
10.32	17.54	17.00	16.94	16.00	0.60	1.00	28 35	8945
11.00	17.42	17.00	16.68	16.00	0.74	1.00	28 00	8630
3.45	17.95	16.75	17.16	16.00	0.79	0.75	34 00	8720
5.50	17.54	16.75	17.28	16.00	0.26	0.75	30 00	8499
4.25	18.05	------------	16.43	16.00	1.62	----------	28 00	9344
9.15	17.37	------------	16.12	16.00	1.25	----------	28 50	8510
5.95	17.37	------------	16.40	16.00	0.97	----------	25 53	8540
3.00	15.23	15.00	14.92	14.00	0.31	1.00	24 85	8888
9.92	16.07	17.00	15.96	16.00	0.11	1.00	28 00	8348
7.12	17.32	17.00	16.04	16.00	1.28	1.00	30 00	8828
6.55	17.50	17.00	17.40	16.00	0.10	1.00	29 00	8923
7.32	16.23	17.00	16.08	16.00	0.15	1.00	27 00	8806
4.90	15.31	15.00	13.97	14.00	1.34	1.00	----------	8505

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*Deficient.

TABLIE IV.—ACIDULATED

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	M. P. HUBBARD CO., INC., BALTIMORE, MD.	
8609	Hubbard's Dissolved Phosphate,	Mackey & Yerkes, Oxford,
	THE HUBBARD FERTILIZER COMPANY, BALTIMORE, MD.	
9112	Hubbard's 14% Phosphate,	Wm. Atkinson, McVeytown,
8322	Hubbard's 16% Phosphate,	Crentz Creek Farmers Cooperative Association, York.
8449	Hubbard's 16% Phosphate,	Hartley & Blaine, Turbotville,
9271	Hubbard's 16% Phosphate,	Preston Brothers, Canton,
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.	
8256	I. A. C. Acid Phosphate,	Deeker & Cook, Mansfield,
	KEYSTONE GRANGE EXCHANGE, MANSFIELD, PA.	
8722	Granger's Acid Phosphate,	R. Simmons, Turtlepoint,
	KOLLER FERTILIZER CO., SEITZLAND, PA.	
9001	Koller's High Grade Acid Phosphate,	Summit Lumber Co., New Freedom,
	LANCASTER BONE FERTILIZER COMPANY, LANCASTER, PA.	
8215	Lancaster Grange Special,	Wm. Albright, Cochranville,
8309	Lancaster Grange Special,	Daniel Koontz, Everett,
	LANCASTER CHEMICAL COMPANY, LANCASTER, PA.	
8231	No. 16 Phosphoric Acid Special,	Morris Bunting & Brother, Oxford,
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
8431	Levan's Dissolved Phosphate,	A. F. Beaver, Hamburg,
8373	Levan's Super Phosphate,	D. W. Geiss, Bellefonte,
8142	Levan's Super Phosphate,	Aaron B. Grubb, Palmyra,
8691	Levan's Super Phosphate,	Musselman Brothers, New Holland,
9402	Levan's Super Phosphate,	L. A. Yeaekley, Patton,
	LISTER'S AGRICULTURAL CHEMICAL WORKS, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEWARK, N. J.	
8927	Lister's Buyers Choice Acid Phosphate,	B. F. Dively, Claysburg,
8794	Lister's Buyers Choice Acid Phosphate,	Ben Everhart, Franklinville,
9236	Lister's Buyers Choice Acid Phosphate,	R. D. Sames, Coopersburg,
9390	Lister's High Grade Acid Phosphate,	J. Frank Lutz, Stevens,
	FREDERICK MEHRING FERTILIZER WORKS, BALTIMORE, MD.	
8312	Frederick Mehring Fertilizer Works, High Grade Acid Phosphate.	E. Chas. Matthias, Littlestown,
	THE MARTIN FERTILIZER CO., PHILADELPHIA, PA.	
9173	Martin's Acid Phosphate, 14%,	E. J. Houck, Bangor,
9172	Martin's Acid Phosphate, 16%,	E. J. Houck, Bangor,
9299	Martin's Acid Phosphate, 16%,	James Thomas Estate, Williamsport,
	THE MILLER FERTILIZER CO., BALTIMORE, MD.	
8910	Miller's Acid Phosphate, 16%,	S. Book & Brother, Quarryville,

PHOSPHATE FERTILIZERS—Continued.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	TOTAL.		AVAILABLE.		INSOLUBLE.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	$	
12.40	16.81	17.00	16.53	16.00	0.28	1.00	27 00	8609
2.75	17.32	15.00	16.98	14.00	0.34	1.00	29 00	9112
11.82	15.92	17.00	*15.78	16.00	0.14	1.00	24 94	8322
12.00	16.17	17.00	16.09	16.00	0.08	1.00	29 00	8449
5.67	18.05	17.00	17.82	16.00	0.23	1.00	----------	9271
8.25	18.51	17.00	16.55	16.00	1.96	1.00	31 00	8256
9.00	17.05	16.00	16.62	16.00	0.43	----------	26 80	8722
8.22	18.11	----------	17.70	16.00	0.41	----------	24 50	9001
7.32	17.50	17.00	16.10	16.00	1 40	1.00	27 00	8215
9.32	17.54	17.00	16.55	16.00	0.99	1.00	30 00	8309
6.47	16.21	17.00	15.89	16.00	0.32	1.00	28 00	8231
7.35	13.99	15.00	*13.61	14.00	0.29	1.00	28 00	8431
8.67	16.07	17.00	*15.73	16.00	0.34	1.00	28 71	8373
9.95	16.09	17.00	*15.77	16.00	0.32	1.00	27 00	8142
8.39	16.33	17.00	16.24	16.00	0.09	1.00	27 50	8691
11.35	16.71	17.00	16.38	16.00	0.33	1.00	26 77	9402
7.92	15.35	15.00	14.65	14.00	0.70	1.00	27 00	8927
5.60	15.24	15.00	14.60	14.00	0.64	1.00	27 00	8794
7.17	16.26	15.00	15.67	14.00	0.59	1.00	28 50	9236
2.15	17.54	17.00	17.09	16.00	0.45	1.00	29 50	9390
8.40	16.42	17.00	16.32	16.00	0.10	1.00	24 63	8312
6.65	16.90	14.75	16.79	14.00	0.11	0.75	26 75	9173
8.20	18.05	16.75	17.96	16.00	0.09	0.75	28 25	9172
6.72	17.48	16.75	17.28	16.00	0.20	0.75	27 00	9299
8.10	17.73	16.50	16.96	16.00	0.77	0.50	27 00	8910

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*Deficient.

TABLIE IV.—ACIDULATED

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
8970	N. A. C. Brand Acid Phosphate,	Edw. Brinton & Son, West Chester,
8852	N. A. C. Brand Acid Phosphate,	The I. W. Scott Company, Pittsburgh,
	G. OBER & SONS COMPANY, BALTIMORE, MD.	
8191	Ober's High Grade Acid Phosphate,	Edw. W. Rupert, Oxford,
	OYLER & SPANGLER FERTILIZER WORKS, GETTYSBURG, PA.	
8569	16 Per Cent.,	Geo. H. Duttera, Guldens,
	RASIN-MONUMENTAL COMPANY, BALTIMORE, MD.	
8802	Rasin's Acid Phosphate,	John Duck, Beavertown,
8560	Rasin's Acid Phosphate,	J. D. Markle, Hanover,
8252	Rasin's 16% Acid Phosphate,	R. J. Dunham, Wellsboro,
9176	Rasin's 16% Acid Phosphate,	Henry K. Mohr, Quakertown,
8702	Rasin's 16% Acid Phosphate,	Leonard Ritter, St. Marys,
9175	Rasin's Sea Wall Special,	Henry K. Mohr, Quakertown,
	THE READING BONE FERTILIZER CO., READING, PA.	
9355	14% Clear Acid Phosphate,	Donaldson Hardware Co., Beaver,
9180	14% Clear Acid Phosphate,	R. C. Frable, Pleasant Valley,
8545	16% Clear Acid Phosphate,	I. H. Dingman, Coudersport,
8718	16% Clear Acid Phosphate,	James Hackett, Smethport,
	READING CHEMICAL COMPANY, READING, PA.	
8300	High Grade Phosphate,	Samuel Cessna, Bedford,
8234	High Grade Phosphate,	J. Harold Long Milling Co., Flemington,
9308	High Grade Phosphate,	Reynoldsville Hardware Co., Reynoldsville,
8657	Reading Clear Acid Phosphate,	D. H. Latshaw, Bechtelsville,
	ROBERT A. REICHARD, ALLENTOWN, PA.	
8733	16% Acid Phosphate,	Ellis Artley, Catawissa,
9208	Reichard's Acid Phosphate,	Robert A. Reichart, Allentown,
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
9079	Royster's 14% Acid Phosphate,	F. C. Deveny, Forest City,
9139	Royster's 16% Acid Phosphate,	J. A. Gardener, Moscow,
8093	Royster's 16% Acid Phosphate,	H. E. Mullin, Christiana,
8699	Royster's 16% Acid Phosphate,	Smith Brothers, Bradford,
	SCHAAL-SHELDON FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BUFFALO, N. Y.	
8867	Soluble Phosphate,	J. A. Adams, Mercer,
	THE SMITH AGRICULTURAL CHEMICAL COMPANY, COLUMBUS, OHIO.	
8840	Smith's 16% Acid Phosphate,	C. R. Forbs, Albion,
	STANDARD GUANO CO., BALTIMORE, MD.	
9403	16% Acid Phosphate,	Pringlehill Grange, Wilmore,
8832	Extra High Grade Acid Phosphate,	Union City Coperative Association, Union City.

PHOSPHATE FERTILIZERS—Continued.

Moisture.	PHOSPHORIC ACID.						Selling price per ton at place of selection.	Chemist's number.
	TOTAL.		AVAILABLE.		INSOLUBLE.			
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.		
%	%	%	%	%	%	%	$	
6.70	17.50	17.00	16.24	16.00	1.35	1.00	27 00	8970
5.37	17.20	17.00	16.42	16.00	0.78	1.00	32 00	8852
9.10	15.95	17.00	15.85	16.00	0.10	1.00	28 00	8191
6.14	15.69	----------	*14.91	16.00	0.78	----------	25 75	8569
7.02	15.92	15.00	15.23	14.00	0.69	1.00	----------	8802
10.05	15.91	15.00	15.58	14.00	0.33	1.00	28 50	8560
6.75	17.12	17.00	16.30	16.00	0.82	1.00	28 65	8252
3.92	18.82	17.00	18.09	16.00	0.73	1.00	29 00	9176
7.02	17.41	17.00	17.22	16.00	0.19	1.00	31 00	8702
5.77	13.52	11.00	13.20	10.00	0.32	1.00	25 00	9175
6.15	16.26	15.00	14.96	14.00	1.30	1.00	26 00	9355
4.45	15.88	15.00	13.93	14.00	1.95	1.00	29 50	9189
7.87	18.01	17.00	16.16	16.00	1.85	1.00	29 00	8545
5.25	18.37	17.00	16.32	16.00	2.05	1.00	28 00	8718
7.15	17.16	17.00	*15.78	16.00	1.38	1.00	25 30	8300
5.32	16.84	17.00	*15.56	16.00	1.28	1.00	29 45	8234
7.45	17.60	17.00	16.55	16.00	1.05	1.00	30 00	9308
5.57	14.92	15.00	14.38	14.00	0.54	1.00	29 00	8657
7.37	16.90	17.00	16.35	16.00	0.55	1.00	27 00	8733
7.12	14.61	15.00	14.35	14.00	0.26	1.00	27 25	9208
4.02	16.14	14.50	14.70	14.00	1.44	0.50	28 00	9079
5.92	17.41	16.50	17.03	16.00	0.38	0.50	31 00	9139
6.27	16.95	16.50	*15.78	16.00	1.17	0.50	26 50	8993
7.35	17.54	16.50	16.79	16.00	0.75	0.50	35 00	8699
6.12	18.09	17.00	16.43	16.00	1.66	1.00	29 50	8867
8.22	17.34	----------	16.92	16.00	0.42	----------	30 00	8840
10.25	16.23	16.50	16.10	16.00	0.13	0.50	24 31	9403
11.62	16.90	16.50	16.80	16.00	0.10	0.50	22 50	8832

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*Deficient.

TABLE IV.—ACIDULATED

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	SWIFT & COMPANY, BALTIMORE, MD.	
8208	Swift's Garden City Phosphate Fertilizer,	Thomas, Haines Co., Malvern,
8536	Swift's High Grade Acid Phosphate Fertilizer.	Eulalia Milling Co., Coudersport,
8287	Swift's High Grade Acid Phosphate Fertilizer.	J. M. Lucas, Valley View,
8210	Swift's High Grade Acid Phosphate Fertilizer.	Thomas, Haines Co., Malvern,
	I. P. THOMAS & SON COMPANY, PHILADELPHIA, PA.	
8226	16% Acid Phosphate,	W. B. Passmore, Embreeville,
8664	16% Acid Phosphate,	B. M. Stoltzfus, Elverson,
9252	16% Acid Phosphate,	A. E. Woodruff, Wysox,
	THE J. E. TYGERT COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., PHILADELPHIA, PA.	
8530	16% Acid Phosphate,	F. A. Ackley, Westfield,
8978	16% Acid Phosphate,	O. M. Lummis, Uwchland,
8440	16% Acid Phosphate,	Joseph Snyder, Danville,
	VIRGINIA-CAROLINA CHEMICAL COMPANY OF DELAWARE, NEW YORK, N. Y.	
8693	V. C. Universal Brand,	John S. Zimmerman, Terre Hill,
	WASHINGTON, ALEXANDER & COOKE CO., CHARLESTOWN, W. VA.	
8747	Wacco Superphosphate,	E. S. Kelley, Gettysburg,
8919	Wacco Superphosphate,	Quarryville Farmers Association, Quarryville.
	THE ROBERT A. WOOLDRIDGE CO., SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
8763	Wooldridge's Florida Acid Phosphate,	A. C. Dubbs, Brillharts,
8803	Wooldridge's Florida Acid Phosphate,	P. J. Ocker, Beavertown,
8929	Wooldridge's High Grade Acid Phosphate,	Cyrus Brumbaugh, New Enterprise,
8292	Wooldridge's High Grade Acid Phosphate,	John A. Crilly, Imler,
8550	Wooldridge's High Grade Acid Phosphate,	David Keller, Windsor,
	YORK CHEMICAL WORKS, YORK, PA.	
8882	Dempwolf's Superphosphate,	Acme Milling Co., Cochranton,
9261	Dempwolf's Superphosphate,	Farmers Cooperative Co., Wysox,
9191	Dempwolf's Superphosphate,	H. E. Weitknecht, Northampton,
		Average,

PHOSPHATE FERTILIZERS—Concluded.

	PHOSPHORIC ACID.							
	TOTAL.		AVAILABLE.		INSOLUBLE.			
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	$	
5.92	15.05	14.00	*13.76	14.60	1.29	----------	26 00	8208
7.40	17.35	16.00	16.43	16.00	0.92	----------	30 00	8536
4.49	16.81	16.00	16.08	16.00	0.73	----------	----------	8287
7.57	17.35	16.60	17.30	16.00	0.05	----------	28 00	8210
7.95	15.35	16.50	*14.74	16.00	0.61	0.50	26 25	8226
7.50	15.75	16.50	*14.95	16.00	0.80	0.50	----------	8661
7.92	16.84	16.50	16.51	16.00	0.33	0.50	27 50	9252
6.15	17.73	17.00	16.35	16.00	1.38	1.00	30 00	8530
6.32	17.92	17.00	16.58	16.00	1.34	1.00	28 00	8978
7.12	17.20	17.00	16.43	16.00	0.77	1.00	27 50	8440
11.35	17.12	17.00	16.42	16.00	0.70	1.00	25 75	8693
7.65	17.03	17.00	16.44	16.00	0.59	1.00	26 00	8747
7.40	16.17	17.00	16.00	16.00	0.17	1.00	25 50	8919
6.25	15.78	15.00	14.07	14.00	1.71	1.00	26 00	8763
5.32	15.75	15.00	14.21	14.00	1.54	1.00	26 25	8803
5.50	18.18	17.00	17.03	16.00	1.15	1.00	28 50	8929
6.10	16.61	17.00	15.91	16.00	0.70	1.00	27 60	8292
7.95	17.41	17.00	16.36	16.00	1.05	1.00	----------	8550
8.55	18.08	16.00	16.89	16.00	1.19	----------	30 00	8882
7.70	17.28	16.00	16.95	16.00	0.33	----------	30 00	9261
4.12	18.88	16.00	17.83	16.00	1.05	----------	26 00	9191
6.85	16.89	----------	16.08	----------	0.81	----------	$28 03	----------

*Deficient.

TABLE NO. V.—ROCK AND

Furnishing Phosphoric

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
8988	Bowker's Phosphate and Potash,	Russell James, Elverson,
8393	Bradley's Phosphate and Potash,	J. A. McKelvey, Blairsville,
9216	Bradley's Phosphate and Potash,	Henry T. Rupp, Breinigsville,
8880	Crocker's Dissolved Phosphate and Potash,	Cochranton Milling Co., Cochranton,
8658	Crocker's Dissolved Phosphate and Potash,	Houck & Henry, Boyertown,
8288	W. S. Farmer's Alkaline Phosphate Revised,	Blackburn Milling Co., Cessna,
9102	Gem Phosphate,	John Holdeman, Oak Hall Station,
8773	Gem Phosphate,	J. E. Jackson, Everett,
9093	Ludlam's Cecrops Phosphate and Potash,	J. F. Ocker, Mifflintown,
8950	North Western Horse Shoe Brand,	William F. Snyder, Stony Run,
8879	Star Phosphate,	Cochranton Milling Co., Cochranton,
8878	Superior Phosphate and Potash,	Cochranton Milling Co., Cochranton,
9338	Superior Phosphate and Potash,	H. L. Orr, Tyrone,
8139	Susquehanna Grain and Grass Producer,	W. O. Krall, Myerstown,
8724	Williams & Clark's Triumph Phosphate,	McHenry & Masteller, Bloomsburg,
	THE AMERICAN AGRICULTURAL CHEMICAL CO., THE POLLOCK FERTILIZER CO. BRANCH, BALTIMORE, MD.	
9107	Pollock's Soluble Phosphate,	A. S. Raffensberger, East Waterford,
8103	Pollock's Victor Brand Revised,	Jones Eavenson, Christiana,
	AMERICAN FERTILIZING COMPANY, BALTIMORE, MD.	
8365	American Formula for Wheat and Corn,	J. H. Neidigh, State College,
8760	Dissolved Phosphate and Potash,	Burtus Eisenhart, East Berlin,
	ARMOUR FERTILIZER WORKS, BALTIMORE, MD.	
9238	Phosphate and Potash No. 1,	Nazareth Coal and Lumber Co., Nazareth,
8583	Phosphate and Potash No. 1,	A. J. Steele, Latrobe,
8517	Tuscarora Phosphate and Potash,	William Gates Estate, Kittanning,
9116	Wheat and Clover,	J. F. Hershbarger, Strodes Mills,
	BAUGH & SONS COMPANY, PHILADELPHIA, PA.	
8359	Baugh's Phosphate and Potash Mixture,	E. B. Fritz & Sons Co., Quarryville,
9347	Baugh's Phosphate and Potash Mixture,	W. W. Haas, Pitman,
9221	Baugh's Phosphate and Potash Mixture,	Lehigh Exchange, Germansville,
9018	Baugh's Phosphate and Potash Mixture,	Manchester Grange and Farmers Cooperative Association, Emigsville.
8363	Soluble Alkaline Super Phosphate,	E. B. Fritz & Sons Co., Quarryville,
	BOWKER FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
9085	Bowker's Phosphate and Potash,	J. B. Dyamond, Waymarth,
9088	Bowker's Superphosphate with Potash,	J. B. Dyamond, Waymarth,
	THE CENTRAL CHEMICAL COMPANY, HAGERSTOWN, MD.	
8807	Commonwealth,	Earnest Bowersox, Beaversprings,
8897	Commonwealth,	M. C. Dietz & Son, Mechanicsburg,
8172	Commonwealth,	J. S. Phillips, Littlestown,

POTASH FERTILIZERS.

Acid and Potash.

	PHOSPHORIC ACID.						POTASH.					
	Total.		Available.		Insoluble.							
Moisture.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Selling price per ton at place of selection.	Chemist's number.
%	%	%	%	%	%	%	%	%	%	%	$	
7.10	7.84	9.00	*7.60	8.00	0.24	1.00	3.94	3.00	3.20	0.74	36 00	8988
7.95	12.00	11.00	10.78	10.00	1.22	1.00	2.10	2.00	--------	2.10	37 00	8393
7.12	10.08	11.00	*9.57	10.00	0.51	1.00	2.44	2.00	0.90	1.54	30 00	9216
6.35	10.59	11.00	10.05	10.00	0.54	1.00	2.41	2.00	2.41	--------	42 00	8880
7.75	10.40	11.00	10.00	10.00	0.40	1.00	2.26	2.00	0.80	1.46	34 00	8658
6.80	8.82	9.00	8.14	8.00	0.68	1.00	3.10	3.00	3.10	--------	35 30	8288
5.95	7.02	7.00	6.50	6.00	0.52	1.00	3.41	3.00	3.41	--------	--------	9102
5.77	6.72	7.00	6.22	6.00	0.50	1.00	*2.60	3.00	2.60	--------	35 00	8773
6.75	10.91	11.00	9.81	10.00	1.10	1.00	2.09	2.00	2.09	--------	31 40	9093
10.47	12.44	13.00	12.16	12.00	0.28	1.00	3.29	3.00	1.20	2.09	--------	8950
5.17	8.83	9.00	8.51	8.00	0.32	1.00	3.30	3.00	3.30	--------	37 00	8879
8.52	13.24	13.00	12.73	12.00	0.51	1.00	2.81	3.00	2.81	--------	41 00	8878
9.17	13.20	13.00	12.17	12.00	1.03	1.00	*2.75	3.00	2.75	--------	41 00	9338
9.50	12.44	13.00	11.81	12.00	0.63	1.00	3.02	3.00	3.02	--------	38 00	8139
7.62	11.23	11.00	10.62	10.00	0.61	1.00	2.16	2.00	--------	2.16	35 00	8724
8.02	11.82	11.00	10.44	10.00	1.38	1.00	2.07	2.00	1.30	0.77	36 00	9167
5.07	7.78	7.00	6.86	6.00	0.92	1.00	3.12	3.00	1.80	1.32	35 00	8103
9.25	12.72	11.00	10.28	10.00	2.44	1.00	5.06	5.00	5.06	--------	42 00	8365
9.57	13.20	11.00	10.32	10.00	2.88	1.00	2.00	2.00	2.00	--------	32 50	8760
6.62	12.63	10.50	11.62	10.00	1.01	0.50	*1.51	2.00	1.51	--------	33 15	9238
6.20	10.86	10.50	10.12	10.00	0.74	0.50	2.46	2.00	2.46	--------	36 00	8583
5.42	10.78	10.50	10.15	10.00	0.63	0.50	2.06	2.00	2.06	--------	35 00	8517
6.37	11.35	10.50	10.69	10.00	0.66	0.50	5.37	5.00	5.37	--------	43 00	9113
7.82	10.27	10.00	9.85	10.00	0.42	-------	*3.60	4.00	3.60	--------	38 00	8359
9.12	10.97	10.00	10.49	10.00	0.48	-------	4.50	4.00	4.50	--------	--------	9047
9.67	11.10	10.00	10.73	10.00	0.37	-------	4.04	4.00	4.04	--------	48 50	9221
10.50	13.33	12.00	13.00	12.00	0.33	-------	5.45	5.00	4.40	1.05	41 75	9018
10.50	10.71	10.00	10.51	10.00	0.20	-------	*1.74	2.00	1.74	--------	32 80	8363
2.25	10.01	9.00	9.23	8.00	0.78	1.00	*2.38	3.00	1.50	0.88	40 00	9085
5.00	12.37	11.00	11.50	10.00	0.87	1.00	*1.72	2.00	0.60	1.12	40 00	9088
5.40	10.68	--------	10.26	10.00	0.42	-------	2.04	2.00	2.04	--------	32 40	8807
7.97	11.10	--------	*9.80	10.00	1.30	-------	2.10	2.00	2.10	--------	33 50	8897
7.07	10.22	--------	10.08	10.00	0.14	-------	2.28	2.00	2.28	--------	32 00	8172

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*Deficient.

TABLE V.—ROCK AND

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	THE COE MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
9091	E. Frank Coe's Famous Prize Brand,	Henry Brown, Cocolamus,
	COLUMBIA GUANO COMPANY, ALLIED WITH F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
9300	Columbia 10-2 Phosphate and Potash,	John Gardner, Millville,
9144	Columbia 10-4 Phosphate and Potash,	C. E. Gantzhorn, Farmersville,
	THE CONSUMERS CHEMICAL CORPORATION, AFFILIATED WITH VIRGINIA CAROLINA CHEMICAL CO. OF DELAWARE, NEW YORK, N. Y.	
9127	Elmash Phosphate,	H. S. Lockwood, South Canaan,
	AMOS EBY & CO., LEAMAN PLACE, PA.	
8121	Pequa Crop Grower,	S. Clayton Rauck, Leaman Place,
	EUREKA CHEMICAL COMPANY, BALTIMORE, MD.	
8167	Eureka Alkaline No. 2,	Manchester Cooperative Association, Emigsville.
9169	Eureka Alkaline No. 2,	Frank Rees, Phoenixville,
	THE FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.	
8676	Farmers Economy,	M. S. Graybill & Son, Bareville,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
8805	XX Potash Manure,	Edward Lipley, Beavertown,
	M. P. HUBBARD CO., INC., BALTIMORE, MD.	
8610	Hubbard's 8-5 Special,	Mackey & Yerkes, Oxford,
	THE HUBBARD FERTILIZER COMPANY, BALTIMORE, MD.	
8315	Hubbard's High Grade Potash Mixture,	J. Emory Moul, Ironore,
9270	Hubbard's Phosphate and Potash,	Preston Brothers, Canton,
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.	
8255	I. A. C. Alkaline,	Decker & Cook, Mansfield,
	THE JARECKI CHEMICAL COMPANY, SANDUSKY, OHIO.	
9372	Super Phosphate and Potash,	Wildrick & Wildrick, Hartstown,
	KEYSTONE GRANGE EXCHANGE, MANSFIELD, PA.	
8296	Grangers Special,	Eli Blackburn, Cessna,
	LANCASTER CHEMICAL COMPANY, LANCASTER, PA.	
8387	No. 13 Special Potash Manure,	J. H. Wingert, Lewisburg,

POTASH FERTILIZERS—Continued.

Moisture.	PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
	Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	$	
7.80	10.72	11.00	*9.65	10.00	1.07	1.00	1.91	2.00	1.91	--------	33 00	9091
7.22	10.40	10.50	*9.63	10.00	0.77	0.50	*1.80	2.00	0.70	1.10	33 00	9300
7.25	10.59	10.50	*9.37	10.00	1.22	0.50	5.28	4.00	5.28	--------	36 00	9144
11.52	14.03	13.00	12.12	12.00	1.91	1.00	2.61	2.00	2.61	--------	40 00	9127
4.42	9.98	11.00	*8.92	10.00	1.06	1.00	3.86	3.00	3.86	--------	35 00	8121
7.00	10.42	10.50	9.95	10.00	0.47	0.50	2.18	2.00	2.18	--------	31 50	8167
7.22	10.91	10.50	10.13	10.00	0.78	0.50	2.17	2.00	2.17	--------	33 00	9169
8.82	10.72	11.00	10.61	10.00	0.11	1.00	*2.56	3.00	2.56	--------	35 00	8676
4.85	13.50	11.00	10.78	10.00	2.72	1.00	5.35	5.00	5.35	--------	48 00	8805
6.75	8.29	9.00	7.97	8.00	0.32	1.00	6.26	5.00	6.26	--------	41 25	8610
7.65	10.96	11.00	*8.41	10.00	2.55	1.00	4.02	4.00	4.02	--------	--------	8315
5.12	10.65	11.00	*8.42	10.00	2.23	1.00	2.06	2.00	2.06	--------	--------	9270
10.05	15.39	13.00	12.25	12.00	3.14	1.00	1.86	2.00	1.86	--------	38 00	8255
7.37	10.97	11.00	10.27	10.00	0.70	1.00	*3.69	4.00	1.80	1.89	40 00	9372
10.57	10.78	10.00	10.10	10.00	0.68	--------	2.12	2.00	2.12	--------	30 25	8296
2.57	11.16	11.00	*8.26	10.00	2.90	1.00	*1.71	2.00	--------	1.71	30 50	8387

*Deficient.

TABLE V.—ROCK AND

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
8474	Levan's Planters Pride,	Monroe Savidge, Hegins,
8949	Levan's Planters Pride,	A. D. Trexler Sons, Trexler,
8281	Levan's Standard Potash Compound 0-12-4,	Hegins Grange, Hegins,
9296	Levan's Stnadard Potash Compound 0-12-4,	Solomon & Waltz, Antes Fort,
8667	Levan's Standard Potash Compound 0-12-4,	A. D. Trexler Sons Co., Trexler,
	LISTER'S AGRICULTURAL CHEMICAL WORKS, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEWARK, N. J.	
8962	Lister's Grain and Grass Fertilizer Revised,	Jacob Plasterer, Lebanon,
8383	Lister's Grain and Grass Fertilizer Revised,	C. M. Sanders, Vicksburg,
8563	Lister's Grain and Grass Fertilizer Revised,	Wm. H. Stock, New Oxford,
8476	Lister's Soluble Crop Grower,	Ralph Eroh, Weatherly,
9320	Lister's Soluble Crop Grower,	A. S. Kelly, Ebensburg,
8236	Lister's Special Compound,	Kencht Milling Co., Mill Hall,
	THE MILLER FERTILIZER CO., BALTIMORE, MD.	
8177	Miller's Clinch Phosphate,	M. T. Harkins, Hickory Hill,
8443	Miller's Clinch Phosphate,	H. L. Ort, Pennsdale,
	PATAPSCO GUANO COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BALTIMORE, MD.	
8795	Patapsco Soluble Phosphate and Potash,	K. L. McClain & Co., Tyrone,
9335	Patapsco Soluble Phosphate and Potash,	K. L. McClain & Co., Tyrone,
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.	
9319	Levering's I. X. L. Crop Grower,	A. F. Stutzman & Sons, Johnstown,
	RASIN-MONUMENTAL COMPANY, BALTIMORE, MD.	
8956	Rasin's Phosphate and Potash Fertilizer,	S. H. Donkel, Myerstown,
8382	Rasin's Special Potash Mixture,	S. B. Miller, Mifflinburg,
9101	Rasin's Victoria Phosphate and Potash,	Kidder & Raymond, Oak Hall Station,
	READING BONE FERTILIZER CO., READING, PA.	
9245	Economy Brand,	Geo. W. Dilliard, Bethlehem,
8477	Economy Brand,	John Hamm, Weatherly,
9159	Economy Brand,	S. C. Kriebel, West Point,
	READING CHEMICAL COMPANY, READING, PA.	
9124	Soluble Grain Mixture,	Peter A. Drake, Waymarth,
8245	Soluble Grain Mixture,	H. L. McCloskey, Beech Creek,
	ROBERT A. REICHARD, ALLENTOWN, PA.	
8735	Reichard's American Eagle,	Ellis Artley, Catawissa,
9211	Reichard's Farmers Favorite,	Robert A. Reichard, Allentown,
	F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
9081	Royster's 8-5 Phosphate and Potash,	F. C. Deveny, Forrest City,
8975	Royster's 8-5 Phosphate and Potash,	Geo. B. MacKissick, Parkerford,
8708	Royster's 8-5 Phosphate and Potash,	A. S. Payne, Marienville,
8444	Royster's 10-2 Phosphate and Potash,	McConnell Brothers, Hughesville,
8983	Royster's 10-2 Phosphate and Potash,	Harvey L. Moses, Chester Springs,

POTASH FERTILIZERS—Continued.

Moisture.	PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
	Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	$	
10.07	12.05	13.00	*11.64	12.00	0.41	1.00	2.08	2.00	0.50	1.58	37 00	8474
7.80	12.95	13.00	12.73	12.00	0.22	1.00	1.86	2.00	--------	1.86	34 50	8949
10.72	11.41	13.00	*11.04	12.00	0.37	1.00	4.10	4.00	3.50	0.60	37 20	8281
7.10	12.76	13.00	12.30	12.00	0.46	1.00	*3.55	4.00	1.70	1.85	--------	9296
8.27	11.44	13.00	*11.16	12.00	0.28	1.00	*3.74	4.00	0.85	2.89	41 00	8667
8.12	10.91	11.00	9.89	10.00	1.02	1.00	2.00	2.00	2.00	--------	--------	8962
7.00	11.03	11.00	9.97	10.00	1.06	1.00	2.06	2.00	2.06	--------	34 00	8383
7.32	11.10	11.00	10.02	10.00	1.08	1.00	2.00	2.00	2.00	--------	33 50	8563
8.00	13.20	13.00	12.66	12.00	0.54	1.00	3.26	3.00	1.10	2.16	38 00	8476
9.92	12.63	13.00	*11.74	12.00	0.89	1.00	2.91	3.00	2.91	--------	43 00	9320
7.15	8.76	9.00	8.01	8.00	0.75	1.00	*2.76	3.00	2.00	0.76	37 00	8236
6.65	10.75	10.50	10.06	10.00	0.69	0.50	2.12	2.00	2.12	--------	32 00	8177
7.05	10.97	10.50	10.34	10.00	0.63	0.50	2.02	2.00	2.02	--------	35 00	8443
7.77	11.23	11.00	10.03	10.00	1.20	1.00	1.92	2.00	0.90	1.02	--------	8795
6.97	11.80	11.00	10.58	10.00	1.22	1.00	1.98	2.00	0.80	1.18	35 00	9335
5.57	9.89	--------	*9.24	10.00	0.65	--------	4.71	3.00	4.71	--------	45 00	9319
8.57	12.56	11.00	10.33	10.00	2.23	1.00	2.00	2.00	2.00	--------	34 00	8956
5.62	10.47	9.00	8.20	8.00	2.27	1.00	6.18	5.00	6.18	--------	38 44	8382
6.50	13.71	13.00	13.00	12.00	0.71	1.00	2.93	2.00	2.93	--------	35 10	9101
7.70	11.67	11.00	10.70	10.00	0.97	1.00	*3.68	4.00	1.80	1.88	39 00	9245
5.90	11.89	11.00	10.36	10.00	1.53	1.00	4.20	4.00	0.70	3.50	--------	8477
5.87	11.93	11.00	9.99	10.00	1.94	1.00	3.88	4.00	2.30	1.58	44 00	9159
8.35	10.84	11.00	10.13	10.00	0.71	1.00	2.32	2.00	2.32	--------	36 00	9124
9.05	13.96	11.00	12.88	10.00	1.08	1.00	*0.90	2.00	0.90	--------	32 25	8245
3.75	10.72	11.00	10.08	10.00	0.64	1.00	2.14	2.00	1.10	1.04	33 25	8735
7.54	8.48	9.00	8.30	8.00	0.18	1.00	5.14	5.00	5.14	--------	40 25	9211
5.75	8.10	8.50	*7.49	8.00	0.61	0.50	5.25	5.00	3.90	1.35	50 00	9081
6.77	8.48	8.50	*7.54	8.00	0.94	0.50	*4.01	5.00	1.50	2.51	42 50	8975
6.00	8.67	8.50	7.89	8.00	0.78	0.50	*4.66	5.00	4.66	--------	48 00	8708
7.65	10.91	10.50	9.95	10.00	0.96	0.50	1.90	2.00	1.90	--------	34 00	8444
8.02	10.59	10.50	*9.53	10.00	1.06	0.50	1.92	2.00	1.40	0.52	37 00	8983

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*Deficient.

TABLE V.—ROCK AND

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
9310	Royster's 10-2 Phosphate and Potash,	Reynoldsville Hardware Co., Reynoldsville,
8219	Royster's 12-3 Phosphate and Potash,	Wm. C. Ritter, Atglen,
9069	Royster's 12-5 Phosphate and Potash,	Geo. Boyer, Pine Grove,
8196	Royster's 12-5 Phosphate and Potash,	Edward Marsh, Malvern,
	SCHAAL-SHELDON FERTILIZER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., BUFFALO, N. Y.	
8869	Phosphate and Potash,	J. A. Adams, Mercer,
	THE SMITH AGRICULTURAL CHEMICAL COMPANY, COLUMBUS, OHIO.	
8836	Smith's Soluble Phosphate and Potash,	Geo. J. Abbey, West Springfield,
	SWIFT & COMPANY, BALTIMORE, MD.	
8349	Swift's Farmers Home,	J. C. Walker & Sons Co., Gap,
8317	Swift's Special High Grade Phosphate and Potash.	Spring Grove Farmers Cooperative Association, Spring Grove.
8457	Swift's Special Phosphate and Potash,	A. W. Eves, Millville,
8669	Swift's Special Phosphate and Potash,	E. B. Fritz Sons Co., Quarryville,
9272	Swift's Special Phosphate and Potash,	C. B. Tyler, Meshoppen,
9197	Swift's Wheat Grower Phosphate and Potash.	Wm. F. Guth, Macungie,
	I. P. THOMAS & SON COMPANY, PHILADELPHIA, PA.	
8925	Alkaline Fertilizer,	Rohrer Brothers, Ronks,
	VIRGINIA-CAROLINA CHEMICAL COMPANY OF DELAWARE, BALTIMORE, MD.	
8770	V. C. Standard Phosphate and Potash,	M. W. Brodbeck, Brodbecks,
8483	V. C. Sweepstakes Brand,	Victor Solt, Lehighton,
	THE WORLD'S FERTILIZER PROCESS CO., SHARPSBURG, PA.	
8586	Shur-Gro,	Theo. M. Hammer, Greensburg,
8849	Shur-Gro,	D. G. Ramsey & Sons, New Castle,
	YORK CHEMICAL WORKS, YORK, PA.	
8263	Dempwolf's Twelve and Two,	Felix Herb, Pitman,
8680	Dempwolf's Twelve and Two,	H. M. Stouffer & Son, Leola,
8213	Dempwolf's Twelve and Four,	Edward F. Bracken, Paoli,
8557	Dempwolf's Twelve and Four,	Loganville Farmers Cooperative Association, Loganville.
9190	Dempwolf's Twelve and Four,	H. E. Weitknecht, Northampton,
		Average,

POTASH FERTILIZERS—Concluded.

Moisture.	PHOSPHORIC ACID.						POTASH.				Selling price per ton at place of selection.	Chemist's number.
	Total.		Available.		Insoluble.							
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.		
%	%	%	%	%	%	%	%	%	%	%	$	
8.62	10.59	10.50	9.94	10.00	0.65	0.50	2.95	2.00	2.95	--------	36 00	9310
9.40	13.37	12.50	12.18	12.00	1.19	0.50	*2.16	3.00	2.16	--------	36 00	8219
9.60	9.73	12.50	*8.79	12.00	0.94	0.50	4.89	5.00	4.20	0.69	--------	9069
9.22	12.25	12.50	*11.06	12.00	1.19	0.50	5.32	5.00	3.50	1.82	47 00	8196
4.85	8.65	9.00	8.01	8.00	0.64	1.00	2.82	3.00	2.82	--------	35 50	8869
6.27	9.98	--------	*9.70	10.00	0.28	--------	2.17	2.00	--------	2.17	32 50	8836
4.15	11.09	10.00	10.20	10.00	0.89	--------	*3.72	4.00	3.72	--------	40 00	8349
6.70	12.88	12.00	*11.72	12.00	1.16	--------	5.06	5.00	5.06	--------	40 00	8317
6.22	8.76	10.00	*8.29	10.00	0.47	--------	*1.50	2.00	1.20	0.30	34 00	8457
5.12	9.59	10.00	*8.49	10.00	1.10	--------	2.35	2.00	1.20	1.15	33 25	8669
5.75	11.29	10.00	10.28	10.00	1.01	--------	2.04	2.00	0.80	1.24	36 00	9272
5.97	13.14	12.00	12.15	12.00	0.99	--------	1.83	2.00	1.10	0.73	36 00	9197
7.40	10.52	10.50	10.11	10.00	0.41	0.50	2.07	2.00	2.07	--------	34 50	8925
8.65	12.92	11.00	10.37	10.00	2.55	1.00	2.03	2.00	2.03	--------	31 25	8770
9.72	12.63	13.00	*11.47	12.00	1.16	1.00	3.18	2.00	3.18	--------	33 00	8483
†2.32	†8.64	5.00	†8.18	5.00	†0.46	--------	†2.36	2.00	--------	2.36	†130 00	8586
†2.62	†8.51	5.00	†7.77	5.00	†0.74	--------	†2.47	2.00	--------	2.47	†260 00	8849
11.10	12.75	12.00	11.82	12.00	0.93	--------	1.98	2.00	1.98	--------	--------	8263
10.85	12.44	12.00	12.02	12.00	0.42	--------	2.39	2.00	2.39	--------	37 00	8680
11.00	12.12	12.00	*11.23	12.00	0.89	--------	4.22	4.00	4.22	--------	--------	8213
9.85	12.18	12.00	*11.21	12.00	0.97	--------	3.97	4.00	3.97	--------	36 80	8557
7.42	13.33	12.00	12.37	12.00	0.96	--------	3.93	4.00	3.93	--------	38 50	9190
7.46	11.13	--------	10.19	--------	0.94	--------	2.99	--------	--------	--------	$36 90	------

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*Deficient.
†Excluded from average.

TABLE NO. VI.—MISCELL

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	NITRATE OF SODA.	
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
9277	Nitrate of Soda,	J. C. Leighton, Tunkhannock,
8641	Nitrate of Soda,	F. L. Miller, Edella,
9329	Nitrate of Soda,	H. L. Stultz & Brother, Altoona,
	ASSOCIATED CHEMICAL COMPANY, HAGERSTOWN, MD.	
8267	Nitrate of Soda,	Edgar Hepler, Hepler,
	BAUGH & SONS COMPANY, PHILADELDELPHIA, PA.	
8620	Nitrate Soda,	B. E. & J. F. Cokely, Scranton,
8390	Nitrate Soda,	Thomas K. George, Homer City,
9130	Nitrate Soda,	W. S. Vansickle, Vardon,
	THE COE MORTIMER COMPANY, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
9072	Nitrate of Soda,	E. E. White, Adelia,
	THE HUBBARD FERTILIZER COMPANY, BALTIMORE, MD.	
8323	Nitrate of Soda,	Crentz Creek Valley Farmers Cooperative Association, York.
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
8143	Nitrate of Soda,	Aaron B. Grubb, Palmyra,
	LISTER'S AGRICULTURAL CHEMICAL WORKS, SUBSIDIARY OF THE AMERICAN AGRICULTURAL CHEMICAL CO., NEWARK, N. J.	
9325	Nitrate of Soda,	A. S. Kelly, Ebensburg,
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
8855	N. A. C. Brand Nitrate of Soda,	The I. W. Scott Company, Pittsburgh,
	READING BONE FERTILIZER CO., READING, PA.	
9025	Nitrate of Soda,	Edward Leinhard, Lehighton.
	READING CHEMICAL COMPANY, READING, PA.	
8422	Nitrate of Soda,	M. H. McCallum, Wernersville,
	ROBERT A. REICHARD, ALLENTOWN, PA.	
8734	Nitrate of Soda,	Ellis Artley, Catawissa,
	SWIFT & COMPANY, BALTIMORE, MD.	
8423	Swift's Nitrate of Soda,	W. E. Schmick, Hamburg,
8318	Swift's Nitrate of Soda,	Spring Grove Farmers Cooperative Association, Spring Grove.
	I. P. THOMAS & SON COMPANY, PHILADELPHIA, PA.	
8894	Nitrate of Soda,	D. L. Hertzler, Mechanicsburg,

ANEOUS FERTILIZERS.

Moisture.	NITROGEN.		TOTAL PHOSPHORIC ACID.		POTASH.			Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present as muriate.		
%	%	%	%	%	%	%	%	$	
1.17	15 80	15.00	----------	----------	----------	----------	----------	----------	9277
2.20	15.76	15.00	----------	----------	----------	----------	----------	80 00	8641
1.45	15.90	15.00	----------	----------	----------	----------	----------	96 00	9329
1.80	15.88	15.20	----------	----------	----------	----------	----------	----------	8267
2.80	15.92	15.23	----------	----------	----------	----------	----------	90 00	8620
1.37	15.80	15.23	----------	----------	----------	----------	----------	100 00	8390
2.92	15.40	15.23	----------	----------	----------	----------	----------	90 00	9130
1.77	15.80	15.00	----------	----------	----------	----------	----------	78 50	9072
2.25	15.26	15.22	----------	----------	----------	----------	----------	80 00	8323
1.40	15.88	14.81	----------	----------	----------	----------	----------	77 00	8143
1.92	15.66	15.00	----------	----------	----------	----------	----------	100 00	9325
3.77	15.58	15.00	----------	----------	----------	----------	----------	190 00	8855
3.95	15.30	15.00	----------	----------	----------	----------	----------	77 00	9025
0.45	15.82	15.00	----------	----------	----------	----------	----------	----------	8422
2.35	13.00	12.30	----------	----------	----------	----------	----------	74 00	8734
1.55	15.80	14.80	----------	----------	----------	----------	----------	----------	8423
1.55	15.82	14.80	----------	----------	----------	----------	----------	71 75	8318
1.47	15.62	15.21	----------	----------	----------	----------	----------	90 00	8894

TABLE VI.—MISCELLANEOUS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	YORK CHEMICAL WORKS, YORK, PA.	
8274	Dempwolf's Nitrate of Soda,	Hegins Grange, Hegins,
8151	Dempwolf's Nitrate of Soda,	Red Lion Cooperative Association, Red Lion.
9192	Dempwolf's Nitrate of Soda,	H. E. Weitknecht, Northampton,
		Average,
	TANKAGE.	
	THE AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK, N. Y.	
8320	Ground Tankage,	J. C. Ernst & Co., York,
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
8744	N. A. C. Brand Ground Tankage,	W. G. Beaver, Catawissa,
9031	N. A. C. Brand Ground Tankage,	Schuylkill County Potato Association, McKeansburg.
8421	N. A. C. Brand High Grade Ground Tankage.	State Insane Asylum, Wernersville,
8344	N. A. C. Brand High Grade Ground Tankage.	J. C. Walker & Sons Co., Gap,
	SWIFT & COMPANY, BALTIMORE, MD.	
9153	Swift's Florists Special Tankage,	Adam Schmehl, North Wales,
	F. L. WINNER, LOCK HAVEN, PA.	
8233	Tankage,	F. L. Winner, Lock Haven,
	YORK CHEMICAL WORKS, YORK, PA.	
8150	Dempwolf's High Grade Tankage,	Red Lion Cooperative Association, Red Lion.
		Average,
	MURIATE OF POTASH.	
	COLUMBIA GUANO COMPANY, ALLIED WITH F. S. ROYSTER GUANO COMPANY, BALTIMORE, MD.	
9143	Muriate of Potash,	C. E. Gantzhorn, Farmersville,
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
8746	N. A. C. Brand Muriate of Potash,	W. G. Beaver, Catawissa,
9032	N. A. C. Brand Muriate of Potash,	Schuylkill County Potato Association, McKeansburg.
8420	N. A. C. Brand Muriate of Potash,	State Insane Asylum, Wernersville,
	YORK CHEMICAL WORKS, YORK, PA.	
8275	Dempwolf's Muriate of Potash,	Hegins Grange, Hegins,
8152	Dempwolf's Muriate of Potash,	Red Lion Cooperative Association, Red Lion.
		Average,

FERTILIZERS—Continued.

Moisture.	NITROGEN.		TOTAL PHOSPHORIC ACID.		POTASH.			Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present at muriate.		
%	%	%	%	%	%	%	%	$	
1.67	15.70	15.00						76 70	8274
0.42	15.88	15.00						71 75	8151
1.07	15.96	15.00						100 00	9192
1.87	15.60							$90 75	
10.75	*4.35	4.94	16.38	13.73					8320
10.60	6.65	5.75	9.95	6.86				67 20	8744
5.90	5.66	5.75	11.93	6.86				66 00	9031
6.60	8.11	8.22	6.86	4.57					8421
8.27	9.24	8.22	9.34	4.57				90 00	8344
6.07	5.67	4.93	*11.42	12.00					9153
11.50	6.09	5.00	*11.35	13.00				60 00	8233
8.77	6.46	6.58	11.84	10.00				64 40	8150
8.57	6.40		11.13					$69 52	
1.65					57.04	49.00	57.04	165 00	9143
1.92					49.81	49.00	49.81	148 20	8746
3.65					49.17	49.00	49.17	147 00	9032
0.97					49.44	49.00	49.44		8420
0.65					54.69	50.00	54.69	140 00	8275
0.25					51.44	50.00	51.44	137 90	8152
1.51					51.93			$123 02	

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*Deficient.

TABLE VI.—MISCELLANEOUS

Chemist's number.	Name of Manufacturer and Brand.	Sample Taken From—
	MISCELLANEOUS.	
	ASSOCIATED CHEMICAL COMPANY, HAGERSTOWN, MD.	
8266	Manure Salts,	Edgar Hepler, Hepler,
	THE BARRETT COMPANY, NEW YORK, N. Y.	
8478	Areadian Sulphate of Ammonia,	John Hamm, Weatherly,
8650	Arcadian Sulphate of Ammonia,	James Reber, Sinking Springs,
		Average,
	NITRATE AGENCIES COMPANY, NEW YORK, N. Y.	
8745	N. A. C. Brand Nitrapo,	W. G. Beaver, Catawissa,

FERTILIZERS—Concluded.

Moisture.	NITROGEN.		TOTAL PHOSPHORIC ACID.		POTASH.			Selling price per ton at place of selection.	Chemist's number.
	Found.	Guaranteed.	Found.	Guaranteed.	Found.	Guaranteed.	Present at muriate.		
2.25	----------	----------	----------	----------	25.38	20.00	25.38	52 00	8260
0.07	21.15	20.75	----------	----------	----------	----------	----------	100 00	8478
0.02	21.10	20.75	----------	----------	----------	----------	----------	----------	8650
0.04	21.13	----------	----------	----------	----------	----------	----------	$100 00	----------
2.25	15.08	15.00	----------	----------	16.08	15.00	----------	101 20	8745